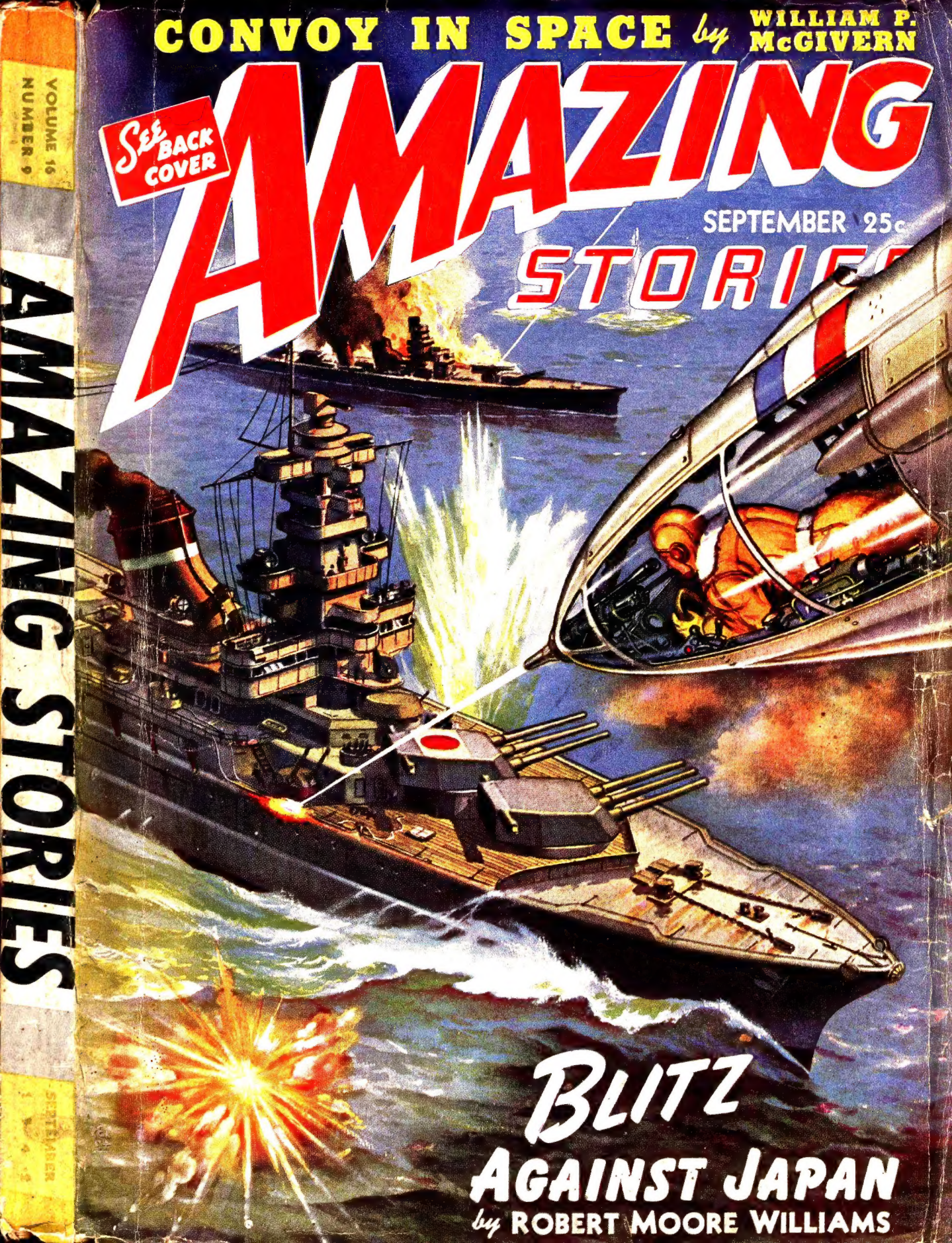
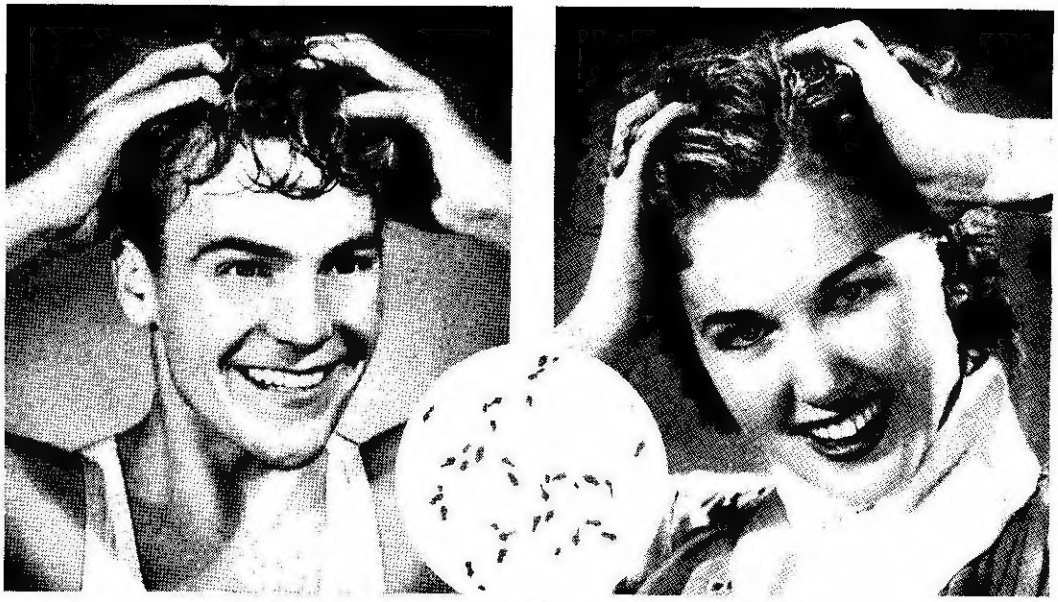

CONVOY IN SPACE by WILLIAM P. McGIVERN
See Back Cover
AMAZING
SEPTEMBER 25c
STORIES
BLITZ
AGAINST JAPAN
by ROBERT MOORE WILLIAMS
VOLUME 16
NUMBER 9
AMAZING STORIES
SEPTEMBER



Pityrosporum ovale, the strange "bottle bacillus" regarded by many leading authorities as a causative agent of infectious dandruff.

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CONTENTS

AMAZING STORIES

TRADE MARK REGISTERED

SEPTEMBER

» STORIES «

BLITZ AGAINST JAPAN (Novelet).....by Robert Moore Williams.. 10
A huge Japanese armada was steaming toward America, and only a few slim mystery planes to stop them!

THE LOVE SONG OF LANCELOT BIGGS (Short).by Nelson S. Bond..... 46
Biggs figured on growing flowers in his cabin, but he had to make 'em grow fast—and how they grew!

CAPTAIN STINKY'S LUCK (Short).....by Gerald Vance..... 64
It was love made Captain Scragg buy that worthless stone; luck made it suddenly become precio us . . .

GIANTS BEYOND PLUTO (Novelet).....by E. K. Jarvis..... 76
It's sort of a shock to return toward home after years in space, and find Earth doesn't answer signals!

CONVOY IN SPACE (Novelet).....by William P. McGivern... 96
Space Lane 7 was Earth's lifeline, and a raiding fleet was slashing savagely at a vital convoy.

VENGEANCE ON VENUS (Short).....by P. F. Costello..... 116
Convicts were escaping from the Venus penal colony, but how? Maybe a prisoner could find out . . .

ROBOTCYCLE FOR TWO (Novelet).....by Max Overton..... 130
The robotcycle spelled happiness for a blind couple—until one of them regained sight. Then . . .

PEACE MISSION TO PLANETOID X (Novel).....by Dwight V. Swain..... 150
It sometimes takes a mighty hard fist to bring peace to a people who have made a mess of it!

THE VENGEANCE OF MARTIN BRAND (Serial)...by G. H. Irwin..... 192
There inside Luna was disaster to Earth—and Martin Brand suddenly found it all in his own lap!

» FEATURES «

The Observatory..... 6
"Quake" Valve..... 41
Salt Versus Heat..... 41
Scientific Mysteries..... 42
So The Savants Say..... 45
To Our Readers..... 62
The Yankee King..... 74
Kings Of The Roost..... 75
Ancient Usury..... 75
Amazing Facts..... 94
The First Slot Machine..... 115
Refrigerated Humans..... 149
Landscapes Of Other Worlds..... 220
Busy Bee—And No Wonder!..... 224
Why You Are What You Are!..... 225
Discussions..... 228
Plastic Airship Of Europa..... 238
Correspondence Corner..... 240

Front cover painting by James B. Settles, illustrating a scene from "Blitz Against Japan"
Back cover painting by James B. Settles depicting the "Plastic Airship Of Europa"
Illustrations by Robert Fuqua; Ned Hadley; L. Raymond Jones; R. B. Sharp; Brady; Russell Milburn; H. W. McCauley; Joe Sewell; Hugo Wolf

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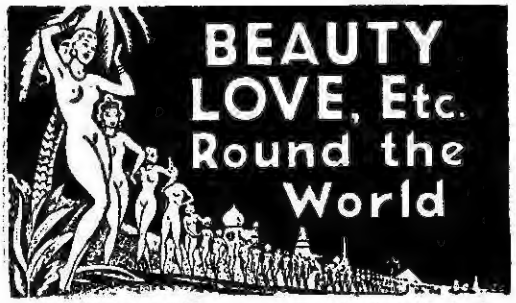

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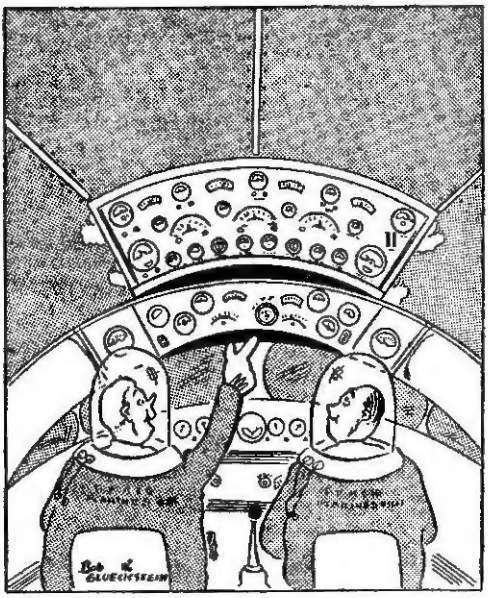
V FOR victory! That's the battle cry of this issue of AMAZING STORIES. And we hereby dedicate this issue as a special victory issue. And to make it that, we've gotten Robert Moore Williams to write one of the most inspired and smashing stories he has ever written. There was a bayonet in his spine when he sat down to write this one, and it'll make *you* stand up and yell too, when you read the story. Believe me, says Williams, we're going to give it to the yellow-bellies—and here's how *I* think it oughta be done!

JAMES B. SETTLES sat down and painted the cover first, came in with it and said: "Here's what I think AMAZING STORIES could do to the Japs! Remember that war tank you invented in 1939?" Well, we sure remembered, and we have a sneaking hunch that both Settles and Williams have put something down on paper that isn't as far from fact as your editor's wild imaginings sometimes are! And sometimes even he rings the bell with a prediction.



"I picked that one up at a pawnshop—neat, huh—it tells the temperature of the coffee in my thermos bottle."

WE want to claim a new discovery. A new pulp writer who will take his place among the list of "greats" in the opinion of the readers of science fiction. He's Dwight V. Swain, who wrote his *first* pulp story for us, and has been writing for us ever since, because we're going to hang on to him like grim death. Frankly, boys and gals, he's good! Read "Peace Mission On Planetoid X" and find out for yourselves!

WE welcome a new writer to the fold this issue. Max Overton does a neat job in "Robotcycle For Two" and we think this one's a different science fiction story if there ever was one. Overton tells us he spent days in an asylum for the blind, getting the true background for his story. We can well believe it, because this one convinces us!

OUR old screwball pal, Lancelot Biggs bobs up in this issue again with flowers (literally) in his hair! Of all the screwy things this guy can get into, Nelson Bond seems to be the screwiest! How can a writer keep on socking out this kind of stuff without a lemon somewhere in the bunch? But are we kicking? Heck no. Keep Biggs coming, Mr. Bond!

INCIDENTALLY, when Robert Fuqua did the illustration for "Blitz Against Japan" we asked him to show a couple of Jap "Zeros." Except that there aren't any pictures of those ships available at the present time, and consequently, we were giving the artist quite a sizeable order! But as you'll notice, there is a Jap Zero plane in the illustration, and it's accurate—as accurate as it can be. It seems the Japs have done a better job of keeping military secrets than we have. They've been pestering hell out of us with planes designed like our own P-40 ships. Maybe we'll learn, next war!

SPEAKING of artists, Russell Milburn seems to be an up and coming favorite. You've commented very favorably on his work, and we promise that it'll keep coming your way. We've given him a novel to illustrate next!

HERE are a few hints on what the future's to bring to you in these pages! Coming soon is Nelson Bond's "Mr. Biggs Goes to Town," another of the popular series. Then there's "Flight from Farisha," by Duncan Farnsworth; "The Infinite Invasion," by Robert Moore Williams; "After an Age," by Eando Binder, a grand new full-length novel by your favorite writer of full-length novels; "The Stygian Terror," by Stanton A. Coblentz. . . . But why should we tell you more? We've got some treats on hand that are really worth keeping secret until we surprise you with them.

MALCOLM SMITH has painted two new covers which you'll see on these pages. One is a spaceship scene, and the other is called "The Chromium Girl." We think you'll like them both. Dwight V. Swain did the lead novel for the spaceship cover, and we think he did a grand job. That one will appear next month.

J. ALLEN ST. JOHN has also painted us a new cover which illustrates a scene from a story by Robert Moore Williams. This is one instance where the story was written first, which is quite a novelty these days.

AT THE present moment, your editor is wondering whether he will be editing an army edition of AMAZING STORIES before very long. It seems Uncle Sam is very much interested in us, and our only gripe is that it's going to be tough on us to be able to throw only exclamation marks at the Japs. We'd rather they were bullets! That's the bad part of being an editor! Nobody believes he's good for anything else.

(Continued on page 8)

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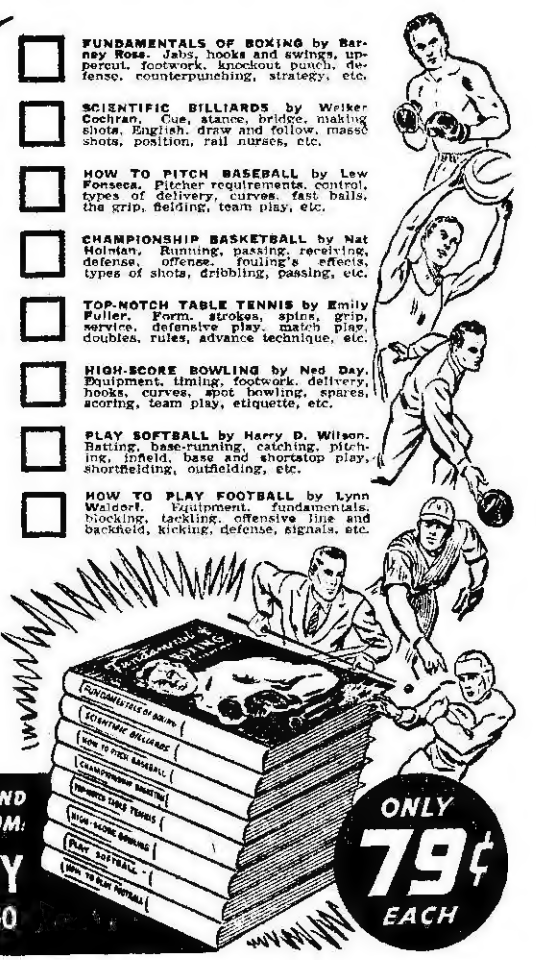

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(Continued from page 7)

DURING our recent prying around for amazing things for our notebook, we dug out some really odd ones. Here they are, gatling-gun style! Hope you like them.

ONE: Some of the fiercest-looking insects are the biggest bluffers of them all. Scorpions, centipedes and tarantulas, reputed to be extremely poisonous, are in reality quite harmless.

True, the desert scorpion does carry a bit of venom in the tip of its curved spine, still its bite is no more serious than that of a honey-bee.

The ant-shaped creature of California, called the sulpugid, which is so feared because of its jaw-like fangs is another bluffer. His bite may inflict slight wounds, but there is no poison contained therein.

The dreaded centipede bite contains poison, but it is not strong enough to cause any serious damage. No one has ever been known to die from a centipede bite.

The biggest make-believe villian of them all is the tarantula. His large hairy body with his sharp fangs make him look vicious. Even though the tarantula has a poisonous bite it is never a really serious one.

How's that for "stuff" about bugs?

TWO: We all love ice cream so well and take it for granted that there never was a time when people didn't know this tasty confection. However, ice cream was first produced commercially in 1851 in Baltimore. By 1900 annual consumption had reached 25 million gallons, and now it is well over 200 million. That's almost a new Ice Age!

THREE: Probably the cruelest murderer to be found among the plants is the sarracenia, a plant found in the North American swamps, especially in Florida.

The flower of the sarracenia is resplendent in two colors—purple or bright yellow—both of which are very attractive to insects. The leaves of the plant are rolled like a cornucopia which act as a lid for the flower.

Insects are attracted to the sarracenia by the beautiful color and sweet odor of the flower. The flower's cup is filled with a sweet-smelling honey which serves as the bait to induce the insects to enter. The gullible creatures soon descend into the cup intent upon obtaining a delicious meal not noticing that the cup is lined with needle points so set that a return is impossible. After eating their fill, the insects start their return only to find that they are imprisoned by the needle points. Struggling to escape with all their might, the insects are soon exhausted and fall into the poisoned water at the bottom of the cup to be devoured by their murderer.

Help, police!

FOUR: An Indian scientific journal has publicized the fact that donkey's milk is one and one half times as digestible as cow's milk. It is used widely in many countries to feed children and invalids. These scientists sure give us a "kick"!

FIVE: Wartime advice to Britishers from Sir John Boyd Orr, nutrition scientist, was to plant, raise and eat more potatoes.

Running a close second to milk and vegetables, which Britain has her fill of, potatoes are the most important food produced. An average of only four pounds of "taters" per person per week are consumed in England. A number of countries eat twice that much.

Sir John stated:

"Some women are afraid to eat potatoes because they think they are fattening. This is nonsense. One pound of bread and butter is more fattening than four pounds of potatoes and vegetables. If you think you are too fat, cut out the bread and butter and eat potatoes and vegetables. In a time of threatened food shortage, the potato is by far the most important crop, because, in addition to its special health value, it gives the highest yield of food per acre. An acre of potatoes gives twice as much food as an acre of wheat."

From planets to potatoes, we give 'em all to you!

SIX: Those tender, sweet kernels of fresh corn we enjoy so much in the summer were not prized so high by ancient American Indians. They sought color rather than sweetness in their ears of corn.

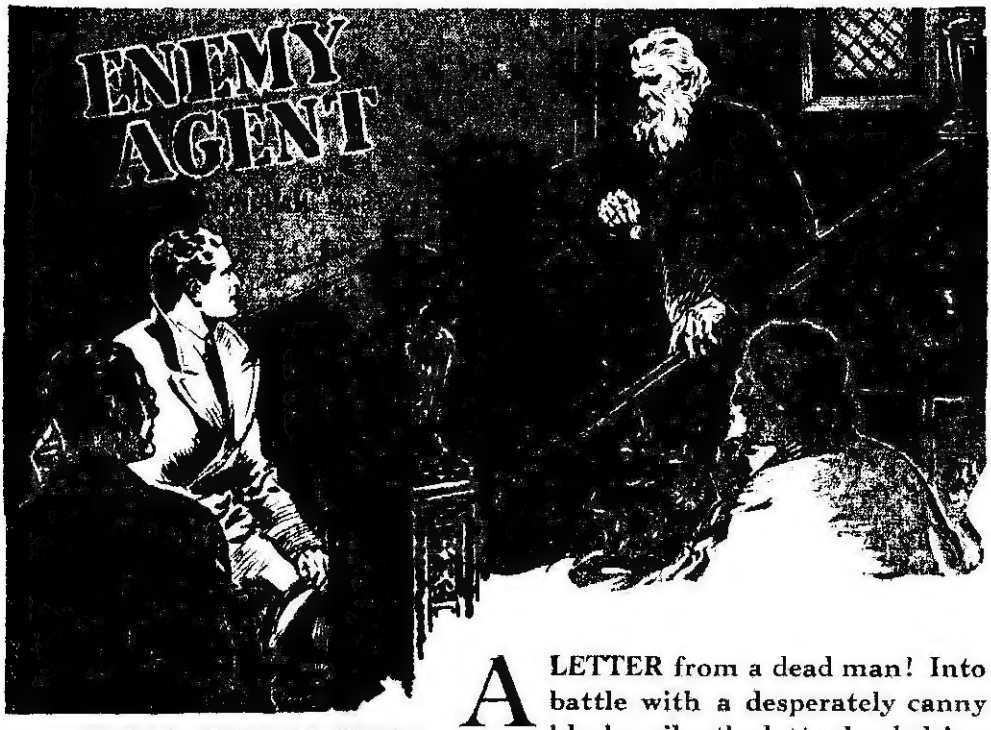
Among all collections of prehistoric corn only one undoubted example of true sweet corn is found. However, the ancient color scheme of corn is prominent, ranging from blue and red to the yellow grains.

Modern natives of Mexico, the land which is given credit for being the "cradle" of corn, raises many types of corn, but only one species of sweet corn.

Sweet corn is thought to have been cultivated in the United States in the first half of the 19th century. Apparently, it is an offspring of field corn, whose accidentally sweet grains the Indians did not trouble to reproduce. It seems that only the white man noticed and appreciated the difference.

So there you are! Science keeps on smashing all our childhood beliefs.

(Concluded on page 63)



A LETTER from a dead man! Into battle with a desperately canny blackmailer the letter hurled Anthony Trent, for he owed a debt of honor to the corpse.... The strange old diplomat, Sir Ambrose Wenlock, was bitter, certain his dead friend had betrayed him. Could Trent, brilliant man of mystery, brave the sinister menace that hovered over the snarling, persecuted old man—and live? You'll thrill to ENEMY AGENT, the magnificent book-length novel starting on page 8.

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SEPTEMBER ISSUE

Mammoth DETECTIVE

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BLITZ AGAINST

by ROBERT MOORE WILLIAMS

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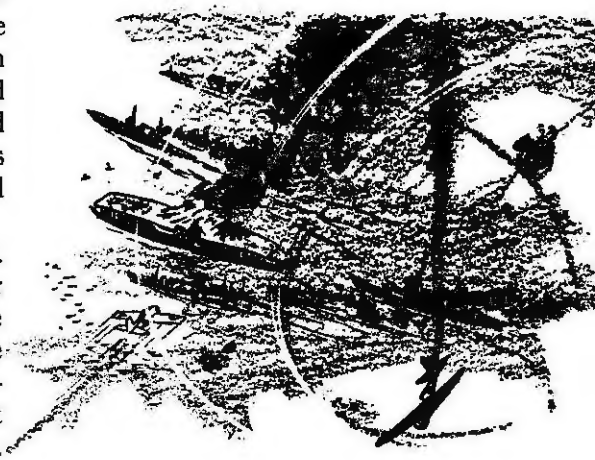
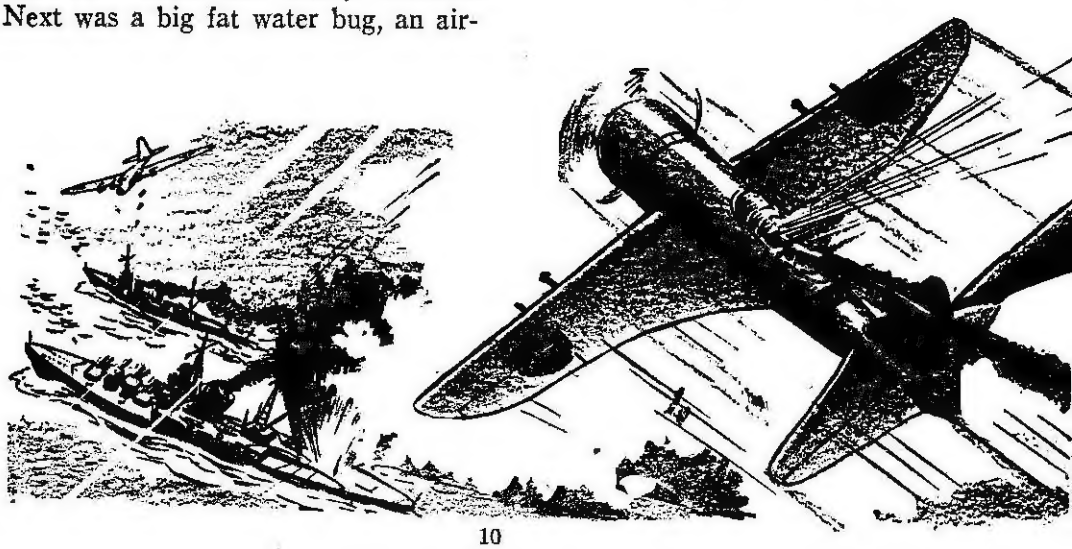
"HOLY jumping catfish!" Lieutenant David York heard the startled words in his earphones. "Look down there, Dave!"

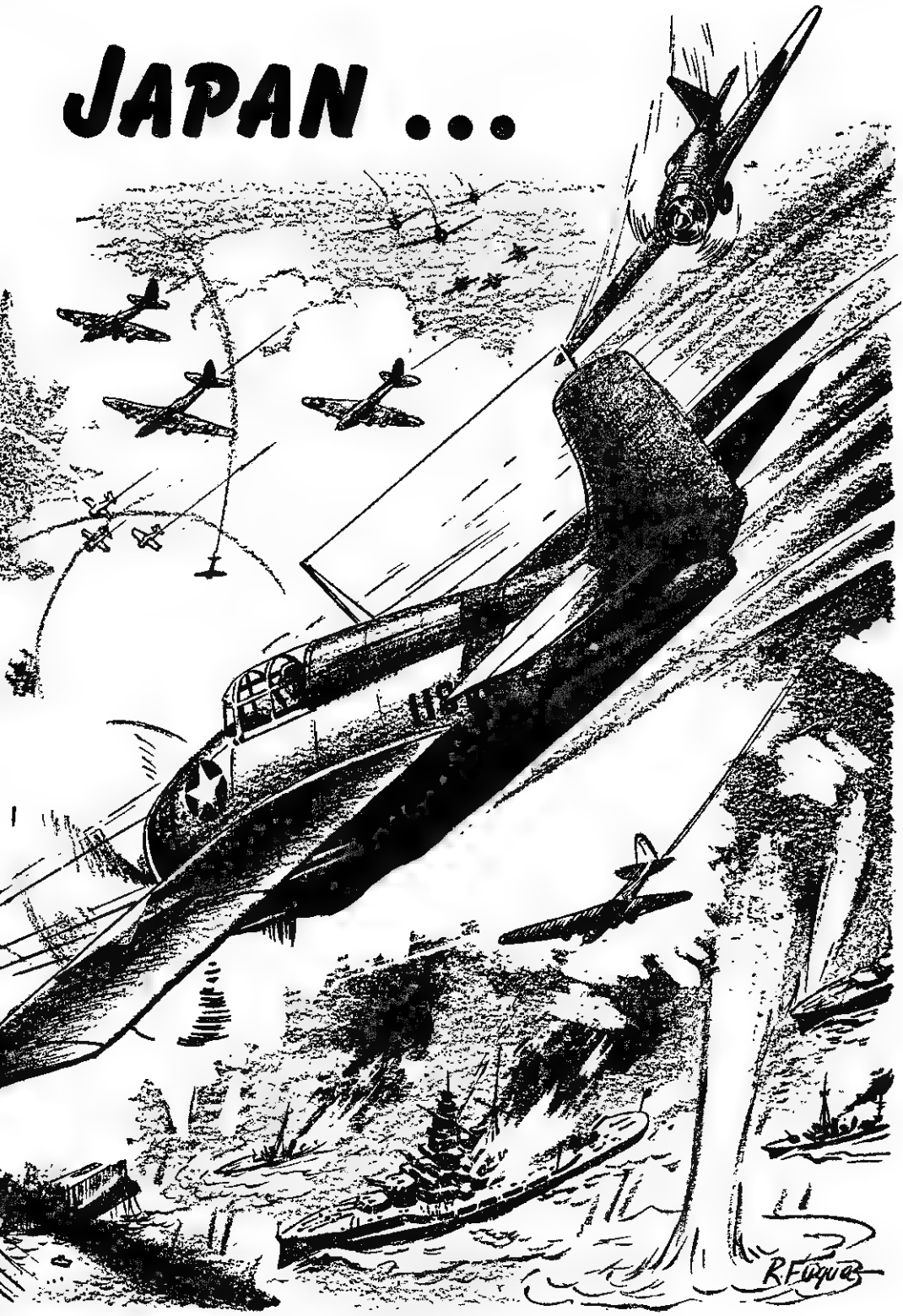
York leaned to the side and looked forward and to the left. Twenty thousand feet below the fast scouting plane lay the blue Pacific, tossing fretfully in the wake of the huge storm that had swept eastward from Hawaii toward the American mainland. But it was not the storm-tossed ocean that held his gaze. It was—

From this height he could see it all. First was a destroyer screen, flung far in front. The destroyers looked like skinny water bugs skittering across the surface of the water. Then came several slightly larger water bugs—light cruisers. Then two heavy cruisers. Next was a big fat water bug, an aircraft carrier, surging forward through the sullen sea.

This was one advance unit, a task force, scouting far ahead, its duties being to smash any defending force that







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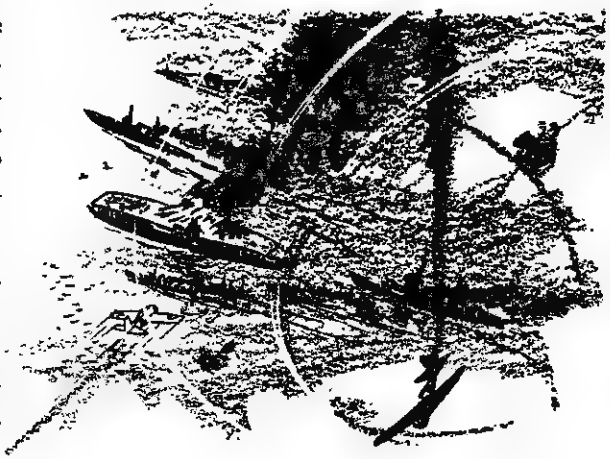

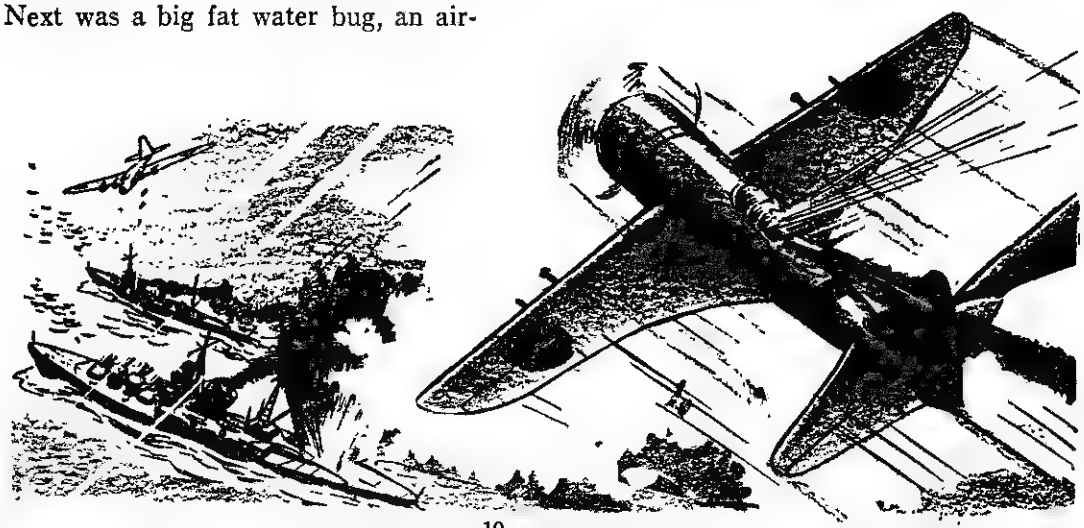

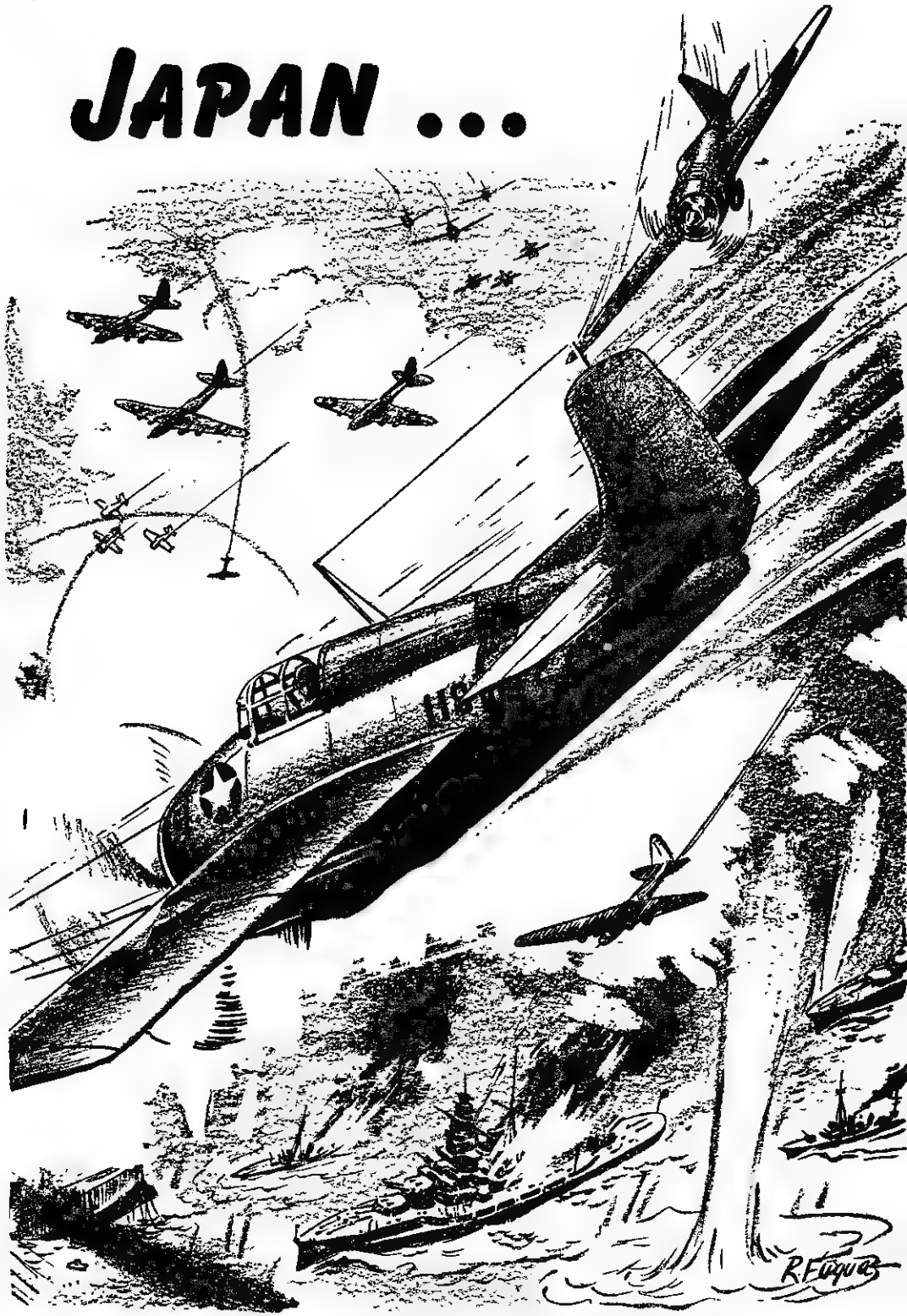

York threw his fighter into a swarm of Zeroes

might appear and to protect the accompanying convoy.

Dave York looked toward the horizon. A little more than a thousand miles in the direction in which he was looking was Hawaii. But his eyes caught a glimmer of something much closer than the islands.

Out there in the distance, like a huge fleet of fat water bugs, were transports —hundreds of them!

"D—Dave—" the excited stutter sounded again in his earphones. It was the voice of Red Johnson speaking from the second seat of the scouting plane. "D—Dave! It— It's the whole damned Jap fleet!"

York didn't answer. He was aware of a constriction in his throat and an iron fist seemed to be tightening around his heart. They had been flying through a heavy cloud bank, with the surface of the sea rarely visible. They had come suddenly out of the clouds, and had found this below them.

Destroyers, cruisers, aircraft carriers. Far back were probably battleships. Transports, hundreds of them, each one loaded to the gills with fighting men and equipment. A gigantic invasion armada, that would strike the west coast of America like a huge spear, disgorging thousands of fighters, tanks, artillery, and disregarding losses, set up bases from which to attack the heart of the continent.

The War Lords of Nippon were on the move! They were reaching taloned fingers for America. They were less than a thousand miles from the coast of California and they were shortening that distance as fast as engines could drive the ships.

"If only we held the Hawaiian Islands, they wouldn't dare bring an invasion fleet in here!" York gritted.

"If only we had a battle fleet, they wouldn't dare attack!" Johnson said.

This was 1943, the year that should have brought victory, if only certain things had not happened. The trouble was, things had happened. The United States no longer held Hawaii. The islands had been over-run by the Japs. The United States did not have a battle fleet. Those grim gray ships, caught in one cataclysmic disaster, rusted now on the bottom of the Pacific.

THE flag of the Rising Sun, as foreseen by men who in their time had been called lunatics but who were now regarded as prophets, was jumping the Pacific Ocean, and unless a miracle came to pass, the boast of the Jap admiral that he would dictate peace terms in Washington, might easily come true.

"Dave!" The voice in the earphones was frantic. "W—what are we g—going to do?"

"Get busy on your radio and call the *Marshall!*" York snapped. "Tell them what we have discovered!"

The *Marshall* was the carrier from which they were operating. She was the only United States aircraft carrier at present operating in the Pacific. She was back there four or five hundred miles nearer the American coast, with an accompanying escort of three destroyers.

"You mean—you mean for me to break radio silence?" Johnson quavered.

"Hell, yes!" York answered.

"But—but they haven't seen us yet!" the gunner's voice was shrill in the earphones. "If we break silence, the Japs will hear our radio and start looking for us!"

"Let 'em look!" York grimly answered. "The *Marshall* has to be warned. The coast defenses have to know what is coming. Start burning holes in the air with that radio!"

"Y—yes, sir."

Lieutenant York was already jerking the plane back to the protection of the clouds. His job, now that the Jap force had been discovered, was to try to dog this invasion fleet and find out where it was heading. It might strike the coast anywhere from northern Washington to southern California. *Where* it would strike was of vital importance to the defenders of the coast, since it would enable them to mass defending planes to meet the threat.

Rat-tat-tat-tat-tat—

York heard the rattle of the machine guns above the drone of his motor. Something whanged through the transparent shell over his head, smacked through the instrument panel, leaving a sudden round hole behind it. York jerked his head around.

A Jap Zero fighter was on his tail. While he and Johnson had been staring at the invasion fleet, the Jappo had come out of the clouds and had spotted them. It was diving at them.

"Holy hell!" Red Johnson shouted. He went for the rear gun.

York jerked the plane up until it seemed to be hanging from a hole in the sky. It was a fast ship, the latest model of scouting plane. He knew he was tossing his gunner to hell and gone all over the rear seat but he had to get out of the sights of that Zero. He heard Johnson yell and he heard the machine gun let go.

"Got him!" Johnson screamed. "Got the—!"

Off to the right something was spinning down toward the surface of the sea, something that was trailing a cloud of black smoke. York got one glimpse of the white folds of a parachute and he knew the Jap pilot had bailed out.

"Good shooting!" he shouted exultantly at Johnson. This was Red's first air battle. He had always wanted to get himself a Zero and now he had one.

"Got that one!" Johnson answered. "But look over yonder."

AGAINST the horizon three specks were visible. Zero fighters racing across the sky toward the American plane. And down below on the surface of the sea the fat water bug that was the aircraft carrier was going about into the wind, preparatory to launching other fighters.

"We're getting out of here, fast!" York gritted. Three against one. Soon it would be a dozen against one. The scout plane was not a fighter. It could fight but it was designed for reconnaissance and observation, to look and run.

Their only hope for safety lay in beating the Japs to the clouds. Once there—if they got there—it would become a grim game of hide and seek. The pilots of the three Zero fighters realized this only too well. Their ships driving through the sky like three well-aimed spears, they were making a desperate effort to cut off the American plane from the clouds.

York opened the throttle as wide as it would go. Up in the nose thousands of horses dug their heels into the sky and began to beat the hard road of the air. At this speed, the engine would burn itself out in minutes. But less than minutes would be needed to reach the clouds and if the engine burned itself out before they got there, it didn't make any difference. They either got to the clouds or they died. The little ship leaped ahead.

"Burn the wings off her!" York vaguely heard his gunner shouting.

"That's what I'm doing," he answered. "You get on that radio and contact the carrier!"

The scouting plane was fast. It was the latest, most advanced model to reach service. But the Zeros were fast

too. York could see them coming. They were driving forward at an angle to intercept him before he reached the clouds.

He shoved the nose of the ship down. The plane picked up speed.

"Are we going to make it?" an anxious voice queried in his earphones.

"I told you to get busy on that radio!" York shouted. "Damn it, Red, we've got to contact the carrier."

"Sorry," Red Johnson sounded slightly strangled. "The only way we will ever contact the carrier is to fly back to her."

"Fly back to her! What the devil do you mean?"

"There's a hole in our radio transmitter big enough to stick your fist through," Red Johnson said. "A cannon shell went straight through, without exploding."

"What?"

"That Zero took a chunk out of us before we got him," the gunner said. They were using the ship's two-way communication system for their conversation. "We don't have a radio any more. That's why you've got to fly this baby, Dave. If any message about this Jap fleet is taken back, we're the lads who have to take it back."

YORK groaned. Their radio was blasted to pieces. Off to one side he caught a glimpse of flashes of light, tracer bullets feeling for them. It was now or never. Either they reached the protection of the clouds or they went down toward the surface of that sullen sea, never to rise again. He shoved the nose of the plane down still farther and held his breath. The roar of the engine was a tornado of sound beating against and threatening to crush his ear-drums. The tracer bullets went past again. The howl of the air past the wings was a torrent of rushing sound. York heard Johnson let go again with the guns. Then—they hit the clouds.

The big pilot slowed the engine to normal speed, lifted the plane to level flight, spun in a steep bank to the right. Gray mist swirled around them.

"D—Dave, you made it!" Red Johnson stuttered in tremendous relief. "Now let those little devils find us."

York glanced at the gas gauge. There was plenty to take them back to the carrier, more than plenty. The slugs that had torn through the plane seemed not to have damaged the engine. It was running as sweetly as an expensive watch. The flight back to the pre-determined rendezvous with the carrier would have to be made by instruments. He made a swift calculation of their position, plotted their course, and set the ship winging toward safety.

Back there in the mist he did not doubt a whole swarm of yellow hornets were looking for them. "Let 'em look!" he thought grimly. "They'll play hell finding us now."

TWO hours later they were searching the sea for the *Marshall.*

"Are you sure you got your figures right?" Red Johnson anxiously asked.

York rechecked them. "They seem to be all right," he said. "We can't be more than a few miles off." He began to send the plane quartering across the sea. Below them nothing was visible but a vast expanse of storm-tossed blue water.

"What this damned ocean needs is a few good landmarks," the gunner complained.

In spite of himself, Dave York grinned. Nothing kept Red Johnson down for long.

"There she is!" the gunner suddenly called. "There's the good old *Marshall,*

waiting for us."

Dimly visible on the horizon was a long gray shape—the carrier! York banked and sent the plane toward it. For the first time since they had sighted the Japs, he dared to relax a little. In his dodging to evade the fighters, he might easily have lost his bearings and missed the carrier completely. But he hadn't missed.

He swept ahead of the ship, banked and turned into the wind. From narrowed eyes, he looked down at the long vessel. Not until then did he clearly see that the ship was canted at a crazy angle.

"What the devil is wrong with the *Marshall?*" he gasped.

"What do you mean?" the gunner asked. Johnson's voice went into quick silence and York knew he was straining his eyes staring down at the big ship. Johnson spoke again, frantically now. "Dave! The *Marshall! She's sinking!*"

"Impossible!" York blurted out. He knew as he spoke he was only stating what he wished were true. He could see now. The plane had brought them closer to the big ship. There were great gaping holes in the flight deck. Bombs had struck there, driving down into the vitals of the ship. In one place the hull plates were warped and buckled—a torpedo had gone home there. The ship was down by the stern and sinking fast.

"The Japs found her!" York heard Johnson's blurred voice in his earphones. "They got to her with dive bombers and torpedo planes. Damn those little devils to hell and gone, Dave. They've caught us with our pants down again!"

The great ship was going down rapidly. York swept low over the deck where he had landed so often. He couldn't land there now. Nor ever again. Wrecked planes lay in a huddle across the flight deck, caught there by the Jap bombs. After the first onslaught out of the clouds, the *Marshall* had never had a chance to launch her own fighters. She hadn't had a chance to do anything. The Japs had been incredibly lucky to catch her in that split second when she was not prepared, but the Japs operated on the basis of incredible luck. Would their luck never end?

There was no sign of the *Marshall's* crew. Probably the accompanying destroyers had taken the men off.

"What—what are we going to do now?" Red Johnson whispered.

York looked at the gas gauge. It was down, well below the half-full mark.

"We're going to fly to the coast," he said grimly.

"H—Have we got enough gas for that?" Johnson asked.

"Plenty," York said firmly. "More than enough. We got gas to spare."

Vehemently he wished he was telling the truth. But there was no need for Johnson to worry about that too. And Red would worry, if he knew how short the gas really was.

CHAPTER II

Men Against the Sharks

"ARE we going to make it?" Red Johnson asked.

Dave York strained his eyes trying to catch the first faint shadow that meant they were nearing the California coast. They were flying under the cloud banks, at a height of about 5000 feet. A tail wind was helping them along. York knew that without this tail wind they would probably have been floating before now.

In the far distance he caught a glimpse of a dim shadow—the rugged

coastal mountains of California. They were fifty, maybe seventy-five miles away as yet, minutes in this fast plane.

"Sure we'll make it," he said in answer to the gunner's question.

Johnson was silent. "You sound like a liar to me," he spoke.

"Hell, if you don't believe me, look for yourself," York snapped. "You can see the coast with your own eyes."

"By golly, I can!" There was vast relief in Johnson's voice. "We're going to make it, Dave! We're going to get there in time to warn the land forces about this Jap fleet!"

"I've been telling you all along we'd make it," York said grimly. He was watching a gauge on the instrument panel in front of him. The single hand on the gauge was far to the right. It was already past the red danger mark. It was touching the spot marked EMPTY. Only drops of gasoline remained in the tanks.

York held his breath and listened for the first interruption in the rhythm of the motor that would indicate a single cylinder had not received its charge of gas. The motor did not falter.

"Maybe the gauge is a little off," York thought tensely. "Maybe there is more gas in the tanks than the gauge indicates."

The plane was eating up the miles. He had long since trimmed the mixture to most economical operation, adjusted the speed to get the most miles per gallon. The mountains had emerged a little now, had become less shadowy, were closer. He could distinguish between them, could make out their outlines.

"God, let there be enough gas in that tank," he thought. He was not praying for his own neck. When he had enlisted in the air force he had accepted the possibility of death. Personally, he was mentally ready to look the Old Man with the Scythe in the eye and call him if not a friend at least not an unexpected stranger. It was the message that mattered, the warning they carried. That had to get through.

The destroyers accompanying the carrier would be able to radio some kind of a warning. But all the destroyers could report was that a Jap task force was off the coast. The men in the destroyers did not know of the vast invasion armada.

The outline of the mountains grew clearer. They were not over thirty miles off the coast. The big flier almost dared to breathe.

The motor shot black smoke from its exhaust, sputtered, d i e d, then caught and ran again as smoothly as if nothing had happened.

"Dave, we're out of gas!" Red Johnson shouted.

"Almost," the big pilot admitted. "Red, if you know any prayers, say them now."

THERE was silence from the back seat of the plane. The motor ran perfectly. From the way it sounded, nothing had happened, but the flier knew it had given the only warning it would give. The next time it cut out, it would stay out. They were eating up four miles a minute. Five minutes would take them, if not to the coast, to within a few miles of it.

"You *were* lying to me, Dave," the gunner's voice came on the earphones.

"There was no need for both of us to worry— *Hey, what in the hell are you doing?*"

The plane had tipped to the right and at the same time an unusual drag had seemed to grab at it. York looked around. The protective cowling over the second seat had been shoved aside. Red Johnson was half-way out of the plane. The cord that ran to his throat

transmitter was still plugged in, enabling him to speak to the pilot.

"I'm going over," he said. "You can glide an extra two or three miles without my weight pulling you down."

"No!" York shouted.

"Yes," Red Johnson answered.

"You d a m n e d fool, you'll be drowned!"

"I can swim," the gunner said defensively. "Only one of us needs to get through. Without me, you've got a chance. With me, neither of us will make it. That message has got to get through. So long, Dave."

There was a lurch and the plane, freed of two hundred pounds of weight, l e a p e d like a bird. "Damn that damned fool!" Lieutenant David York swore. In his heart, he knew that Red Johnson was right. Without the extra weight, the plane *might* get through. It might not too, but there was a chance it would. Red Johnson had bailed out in order that this chance might come true. That was the kind of a guy Red Johnson was.

Below him, against the blue of the Pacific, he saw a sudden mushroom of white—Johnson's parachute.

York did not hesitate. Not a man, not a woman, not a child, in the United States would ask that such sacrifices be made for them. Nor would they criticize him for doing what he knew he was going to do. The information he carried was of vital importance. But Red Johnson was important too.

York kicked the plane over into a dive, quickly estimated where Johnson's parachute would hit, and as near that spot as possible, pancaked down on the water. Split seconds before he hit, the motor quit. The plane would float for minutes but it was not a seaplane and it would not float very long. York yanked out the rubber boat, hastily inflated it, flung it over the side, then swam to it. Red Johnson landed not fifty yards away.

"Damn it, Dave—" were his first angry words as dripping he came over the side of the boat.

"The motor quit," York said. "I couldn't have glided to shore. Too far."

The two men stared at each other.

"Well, it did quit," York said.

"Just before you hit the water," Johnson answered accusingly. "You could have glided ten or fifteen miles."

"Uh huh," York said. "And maybe you could swim that far! No sale, Red." He reached inside his jacket and brought out a package of cigarettes. "Here, you damned fool, have a cigarette."

The boat, with its crew of two, floated in the long swell of the Pacific.

FOR a time, they tried to paddle the boat with their hands but gave it up as a hopeless task. The wind was blowing them shoreward and York tried to rig up a sail out of his jacket but that wouldn't work either. He sat there and watched the sea. A shark passed by, its triangular fin knifing through the water. York looked at the shark but didn't see it.

"Damn Riemann!" he said, out of the somber depths of his thoughts.

"Who?" Johnson asked.

"Riemann. The fellow who cost us two battleships."

"Oh, yes, Riemann. The scientist who developed the secret weapon."

"Who *thought* he had developed a secret weapon that was going to end the war," York harshly corrected. "He talks some politician into using pressure in Washington so he could get a trial. He brings his weapon out of Hawaii and installs it on two battleships. He says it will knock planes out of the sky as far as they can be seen, that it

will smash the biggest battleship that was ever floated. He takes the battleships out for tests. Blooie! Two battleships gone. Only they were *our* battleships, the ones on which the weapon had been installed. This might not have been fatal if only the Japs had not chosen the very next day to attack the islands, with every carrier, every cruiser, every destroyer, and every battleship they had, not to mention a couple of hundred transports loaded with troops. We were two battleships short, two ships that might have meant the difference between victory and defeat. That's why we lost the Hawaiian Islands. That's why I'm damning Riemann. If he had known what he was doing, that Jap invasion fleet wouldn't be out there right now." The flier gestured toward the west. Somewhere out there the Armada of the Rising Sun was moving steadily toward America.

"Oh," said Johnson. He looked away.

York returned to his sombre thoughts. The shark came back and nosed in a slow circle around the rubber boat.

"Riemann probably thought he was doing something to help our side," the gunner ventured.

"Maybe," the pilot answered. "But I doubt it." His voice was bitter.

"What do you mean?"

"I mean a lot of people are beginning to wonder whether the Jap attack that followed so closely on the heels of the loss of two battleships was a coincidence or not," York answered. "Maybe the Japs knew we were going to lose those ships. Maybe they hired Riemann to destroy them with some secret weapon. Maybe Riemann was another Benedict Arnold! That's what I mean," York said. His voice was choked and hot with anger.

"You're wrong," said the gunner quietly.

"How do you know I'm wrong?" York demanded.

"Riemann would not do anything like that."

"How do you know he wouldn't? Do you know him?"

"Yes, I know him," Johnson answered. "I know he cost us two battleships but I know that this was an accident and not planned treachery on his part."

YORK looked keenly at the gunner. Johnson had sandy hair and a round, child-like face. He was looking at the sea.

"How do you know these things?" York asked.

"Riemann is my uncle," the gunner answered.

York didn't say anything. The information shocked him. Red Johnson was all right but one good apple on a family tree didn't guarantee that the rest of the apples were free of worms.

"What happened to Riemann?" York asked abruptly.

"I don't know," Johnson answered. "He wasn't killed in the loss of the battleships. I think he came back to the mainland. Then he disappeared."

The loss of the two battleships and the catastrophic battle that had followed, had occurred five months in the past. The Japs had spent that time consolidating their position in the islands and preparing for a thrust at the mainland. Meanwhile in the United States hell had popped. The country was in a panic. The whole western coast line, from Alaska to the Panama Canal, was open to invasion. It was simply impossible to provide adequate guards for those thousands of miles of unprotected beaches. A very large section of the population had advo-

cated peace with Japan at any price, not realizing that any such peace would only be an armed interlude in which Japan, with the enormous resources now at her disposal, would prepare to attack America in overwhelming force.

There had been dozens of Congressional investigating committees. Heads of naval officers would have rolled, only the naval officers, for the most part, were quietly sleeping at the bottom of the ocean. If they had made a mistake, they had died for it.

Meanwhile, in any of a thousand towns in the United States, a man named Riemann would have been lynched. Riemann hadn't been lynched. He had disappeared and not even the awesome power of a subpoena from a ,Congressional investigating committee had been sufficient to bring him forth.

"Have you been in touch with him?" York asked.

"No," the gunner answered. There was a sullen uncomfortable look on his face as he stared at the sea.

A second shark had joined the first one. They idled around the rubber boat, patiently waiting.

Far in the distance York heard the throb of motors. He scanned the sky. A PBY boat was coming in from an outshore patrol. It was flying low. York and Johnson waved their hands, screamed at the top of their voices. The boat went past them.

"Oh, hell!" the big flier almost sobbed the words.

As if the pilot had heard him, the big flying boat veered and started back. It swept over them, circled, splashed to a landing, and taxied to them.

"Where the devil did you drop from?" an astonished flying officer asked them.

"Take me to the commanding officer of your district and don't waste any time getting there," York answered.

Willing hands helped them into the big flying boat. It lifted off the water and took a bee line toward its base.

The disappointed sharks deserted their vigil around the abandoned boat and went looking elsewhere for their dinners.

CHAPTER III

Before the Storm

THE commanding officer was middle-aged. At his temples his hair was turning gray and there were lines on his face that had not been there two years before. He sat at his desk and listened quietly to what York had to say. The room was jammed with other officers and the flier could hear their hushed, tense breathing.

"You say you are from the *Marshall?*" he asked, when York had finished.

"Yes, sir."

"Where is she?"

He told them where she was. In the hot silence that followed he could hear men cursing under their breath.

"Damn—"

"Damn those doubly-damned Japs to hell and gone."

Smothered curses. No profanity was adequate to express the way these men felt.

"Do you have any idea where this armada will strike?" the commanding officer asked.

"No, sir. They were too far out to determine that. They may swing a thousand miles to the north or to the south. Or they may bore straight in toward San Francisco, sir. There is no way of knowing."

The lines in the officer's face deepened. Only too well he recognized the truth in York's words! Unless patrol

planes could locate and dog the fleet in, there was no way of knowing where the blow would be delivered.

"Well, we'll do the best we can," the commanding officer said. He turned to his staff. "Gentlemen, you have heard what Lieutenant York has told us. Put plan A into operation at once."

The staff went quickly and efficiently to their duties. Plan A was a prepared blueprint for defensive operations. It was to be put into effect if an invasion fleet appeared off the coast. Once plan A was ordered, every interceptor field in the military area would be put into a state of instant readiness, off-shore patrols would be strengthened, and complete blackouts would be ordered.

The only thing that was wrong with plan A was that it had been drawn up to include the strength of a defensive fleet. And there wasn't any fleet!

"You two men will attach yourselves to my command," the officer said to York and Johnson.

"Yes, sir," they said.

"Could I—" York asked. "Could—I mean, sir—there is someone I would like to see."

"You are relieved from duty until nine o'clock tonight," the commandant said. "But be back here by that time. We will need every man and every plane we own."

"Thank you, sir."

York and Johnson walked out of the building together but the gunner seemed to sense that the big flier did not want him to go farther. "So long, Dave," he said. "I'll see you later."

York nodded and walked away. The last he saw of Johnson, the gunner was standing in the doorway staring wistfully after him.

YORK saw her waiting for him on the steps of the hospital, a gray cloak thrown over her nurse's uniform. His heart leaped at the sight. There was a man with her, a tall figure impeccable in a naval uniform.

"Haake!" York thought. "I would find that louse where she is. My last two hours with Rita and that — — has to be sticking his nose in."

The presence of Haake did not prevent her from flying to York's arms.

"Oh, David," she whispered. "I'm so glad to see you. I could scarcely believe it was you when you called and said you were coming out. When did the *Marshall* make port?"

"The *Marshall,*" York answered bitterly, "didn't make port."

"What's that?" Haake interrupted. He had been a grim witness to this meeting. "What happened to the *Marshall?*"

"Oh, hello, Lieutenant," York said coolly. "I didn't notice you standing there."

Haake colored but stuck to the point. "What happened to the carrier?"

"Nothing happened to the carrier," York answered.

"But you said she didn't make port!"

"Now that you mention it, I believe I did say something like that," the flier said. "I merely meant that the *Marshall* is at sea."

"Then how did you get here?"

"I flew in on a special mission," York said. He had no intention of revealing what had happened to the carrier. Careless words had cost too many lives in this war. While Haake was all right, so far as he knew, Haake might mention the loss of the carrier in some place where the information would be relayed to the enemy.

Rita Harvey looked from one man to the other. She was a tiny little thing with gray eyes and a face made for laughing. She stamped her foot.

"Boys!" she said.

York grinned and the effort took a little of the grim tension from his face. "Sorry, Rita," he said. "But I have two more hours of freedom and I would like to spend them with you."

"Of course, David." She hesitated. "But I did have a date with—"

"With Lieutenant H a a k e ? I'm afraid the lieutenant will be unable to keep it."

"Why not?" Haake bristled.

"Because a general call is out for all men on leave to report for duty immediately. If you will get in touch with your headquarters, they will confirm this for you."

"A general call?" Haake's eyes narrowed. "That can only mean an emergency."

"I can't say about that," York answered. "I was granted special leave and I have to be back by nine o'clock. But if I were you, I would certainly call in and verify the order."

"I'll do that," Haake snapped angrily. "I have to make a telephone call anyhow. Rita, if you will excuse me for a few minutes—"

"Certainly," the girl said.

LIEUTENANT HAAKE vanished toward the telephone booth in the corner drug store.

"Come on," York said to the girl. "Let's get away from here before he discovers he has been tricked."

"What do you mean? Isn't there a general call out?"

"Not yet," the flier answered. "I just wanted to get rid of the lieutenant. Come on."

He led her to a little park near the hospital. His manner was so grim that she knew something was wrong.

"David," she asked, "what is it? What really happened to the *Marshall?*"

The park was on the side of one of San Francisco's hills. Night was rapidly falling and in the gray dusk below he could catch glimpses of the bay and the bridge across the Golden Gate. It was time for the street lights but they were not coming on. Nor were the lights in the stores coming on. Blackout orders had already been imposed. Fog was coming in from the sea, a fog that might never lift again. In the gray gloominess of the nearing night, San Francisco uneasily waited for whatever was going to happen.

York told her about the *Marshall* and the Jap invasion fleet. "Plans for evacuation have already been made," he ended. "You better get away from here. Go inland or up or down the coast. If the Japs hit Frisco, they won't leave a building standing."

She was silent for a long time. She pressed against him and he could feel her trembling.

"It's tough luck, Rita. For us, and a lot of other people. I'll look you up after this is all over." His voice was very gentle. "In the meantime, you had better leave."

She stirred protestingly. "No," she said. "I'm a nurse. I'll be needed here."

He didn't argue with her. They sat there on a bench in the darkness, looking down at the silent city. He put his arm around her and kissed her and she clung to him. Each of them knew that when he went away this time, he might never come back. And if he did come back, he might not find her. Hell would walk through the streets of Frisco and demons out of the pit would dance in the flames as the city burned.

In the darkness a voice called, "Dave! Dave York! Where are you?"

The flier recognized the v o i c e. "Here I am, Red. What is it?"

FOOTSTEPS came quickly across the grass toward them. Two figures loomed in the darkness. A second voice said unpleasantly, "You thought you would pull a fast one, eh, York?"

"This is Lieutenant Haake," Red Johnson said. "I knew you had come to the hospital and when I went there and looked for you, Lieutenant Haake was there and he volunteered to help me find you."

"I have already met the lieutenant," York said drily. "What's on your mind, Red?"

"I want to talk to you," the gunner said. He sounded worried. "Something has come up."

"What is it?"

Johnson glanced at Rita Harvey and sidewise at Haake. "I want to talk to you, alone. Would you step over here, Dave?"

"Oh, all right," York said. He was spending what might easily be his last hour with Rita and Johnson's insistence on seeing him alone annoyed him. "What is it?" he said, when he had followed the gunner a few steps away.

"After you left, I went to the post to see if there was any mail for me. Mail hadn't been forwarded to the *Marshall* for several weeks, you know. I found a letter waiting for me."

"So what?" the flier snapped.

"You don't understand," Johnson said quickly. "It was from my uncle."

"From Riemann!" York almost shouted the words.

"Shh—" the gunner hissed. He glanced quickly toward Rita and Haake, to see if they had overheard.

"What about him?" the flier asked.

"He said that ever since—ever since the—" Johnson could not quite bring himself to mention the destruction of the fleet. "Well, he said he was working on a new development of his secret weapon—"

"What?" York hissed. "He's still working on that damned radium projector that cost us two battleships!" His voice was harsh with suppressed emotion. "Damn it, Red— Where is he?"

"I'm not going to tell you," the gunner said.

"Then what the hell are you coming to me for?"

"Because Riemann needs help. He wants two or three or four fliers, if he can get that many. He told me to get them for him, if I could. That's why I came to you, Dave. I want you to go with me to the place where my uncle is working on his weapon!"

"You want me to help Riemann!" For a moment the preposterousness of the proposal left York breathless.

"He needs a few fliers," Red Johnson said. "He wouldn't ask for them if he didn't really need them. He knows he can't go to any of the services for them. He not only wouldn't get what he asked for but he would certainly find himself clapped into jail to wait action by a court of inquiry. Dave—" Johnson's voice broke. "You know what we saw out there at sea. You know what's coming. Dave, I'm asking you to take a gamble. If my uncle has what he thinks he has, there is a chance—it's only a chance, mind you—*that we may be able to stop that Jap fleet cold in its tracks!*"

"Go to h—" York started to say. Then he caught himself. Whatever Riemann might have done, whether he had coldly calculated the destruction of two battleships, or whether he hadn't, there was one thing that the big flier knew to be true, knew because he had seen it with his own eyes. He had seen Red Johnson deliberately bail out of a plane on the thin hope that the loss of his weight might enable the ship to reach shore. Whatever Rie-

mann was, his nephew was all-American.

THE flier hesitated, torn between conflicting thoughts. It was his duty to report what Johnson had told him, to let his superior officers act upon it. But, with the knowledge of what had happened when they had tested Riemann's weapon the first time, no officer would under any circumstances authorize a second test. Or, if the high command did agree to take a second look, it would be only after months of exhaustive investigation. There wasn't time to investigate, to wade through miles of red tape. There wasn't even much time left to hope. If the Japs took Frisco, the pacifists might force peace at any price.

"I know how you feel, Dave," Red Johnson said, his voice a whisper in the night. "You don't have to believe in Riemann. But you can believe in me. I wouldn't let you down."

"I know it," York said.

He was still trying to make up his mind. He looked toward the west. He could smell fog in the air. It was creeping up from the bay, pressured by a gloomy wind. Somewhere behind him Rita was waiting. In the city around him an hundred thousand other girls were waiting, waiting— Up and down the coast millions of people waited.

"If we go, we will be classed as deserters," the flier said quietly. "Desertion in the face of the enemy is a matter for a court martial, and you're lucky if you get off without being shot."

"I know, Dave," Red Johnson said.

"You are going to Riemann, knowing that you will face a charge of desertion, knowing also that you may be charged with aiding the enemy?"

"Yes, Dave," Red Johnson said.

The flier sighed. "Then, by God, I'm going with you!" he said.

"DAVID!" Rita's voice came through the darkness. "It's almost nine o'clock. You will have to hurry to return to duty on time."

He drew her to one side. "Listen, kitten," he said. "I'm not returning to duty."

Surprise made her speechless.

"I'm going over the hill," the flier said.

"You—you're going to desert!" she gasped.

"That's one way to put it," York said grimly.

"You don't mean it!"

"I never meant anything more."

"They'll — they'll — " she could barely say the words. "They'll shoot you!"

"After he's dead, it doesn't make any difference to a man whether the Japs or his own comrades shot him."

"But why are you doing such a thing, David? Why? Why? Why?" There was a hysterical note in her voice. She loved this big man and she was demanding an explanation of his actions.

"Kitten, I can't tell you," he said.

"But I have to know," she insisted. "I can't stand it, not knowing what has happened to you."

They were standing well away from Johnson and Haake. "Dave, we've got to move," the gunner called out.

"All I can tell you, kitten, is that I'm going to help a man named Riemann win a war," York told the girl.

The name seemed to mean nothing to her. York wondered if she had never heard of the man with the secret weapon. She did not seem to know what he was talking about. She pulled at his jacket.

"Take me with you," she said.

"Kitten, I can't," he protested.

"Why can't you?"

"I can't take you with me now any more than I could take you up in a fighting plane. Rita, I don't have time to explain everything. You've got to believe in me."

He kissed her. She watched him and Johnson vanish in the night. Not until they were out of sight did she begin to cry.

Lieutenant Haake remained with her. "If I may ask, what is this all about?" he queried. "There, there, Rita, don't cry." He patted her shoulder and because she desperately needed consolation, she was willing to accept it from him.

"He—he's going to desert," she sobbed.

"Desert!" Haake gasped. "Why would he do a thing like that?"

"He—he wouldn't tell me. A—all he would say was that he was going to help a man named Riemann win a war!"

"Riemann!" If the name meant nothing to her, it certainly meant something to Haake. "Tell me," he demanded. "What was the name of that fellow who came for York?"

"Red Johnson," she answered. "He is a gunner off the *Marshall*. He flies with David!"

"Johnson!" the lieutenant exclaimed. "Riemann's nephew! We've been keeping close track on him—" Haake broke off. "Say nothing of this to anyone!" he snarled at the girl. "Do you understand? Do not mention this to anyone?"

"Why shouldn't I mention it?" she demanded.

"Never mind why," he snapped. "It will not go well with you if you disobey me."

Haake was obviously excited. Without attempting an explanation, he disappeared into the darkness, moving in the direction York and Johnson had gone.

Incredulously Rita Harvey stared after him. She had the impression that something was terribly wrong, but she didn't know what. For a moment she stood irresolutely, wondering what she ought to do.

"David!" she called.

There was no answer. They were too far away to hear her.

She hastened after them.

CHAPTER IV

Riemann's Secret Weapon

RED JOHNSON brought the motorcycle to a halt. He was on the saddle and Dave York was riding in the side car. It was a stolen motorcycle. They had borrowed it from the army.

"How much farther?" York asked.

"Only a mile or two," the gunner answered. He looked back down the winding mountain road they had been following. No lights showed behind them. He cut off the motor and listened. The silence of the night was broken by the sound of a howling dog.

"You think we might have been followed?" York asked.

"No," the gunner slowly answered. "I don't think so."

He started the motor and they drove on. They were not using the headlight. York gritted his teeth as they bounced over the mountain road. He could pilot a fighter plane without thinking of the danger but riding the sidecar of a motorcycle running without lights was something de did not relish.

"My uncle owns a small mountain ranch near Frisco," Johnson said. "There are several large caves on it, and while I don't know for sure, I

imagine he has fitted up a laboratory in the caves. Ah! Here we are!"

He turned the motorcycle into what looked like a narrow trail by the side of an overhanging cliff.

"Halt!" a voice snapped in the darkness. "Who goes there?"

"Friend," the gunner promptly answered.

"Advance and be identified," the voice said. "And no monkey business," it added, "or I'll blow you to hell and gone."

The beam of a flashlight was turned on them. Stiffly they got off the motorcycle and walked forward. Johnson produced a letter which he handed to the guard.

A few minutes later they were passed through a heavy door and found themselves in a small, lighted cavern.

"Riemann's right over there," the guard said. "You talk to him. I got to get back on the job."

Out of the corner of his eyes, York saw that Red Johnson had quite the happiest look on his face he had ever seen. Johnson looked like a kid who has been caught in the dark and has been terribly afraid, only now the dark was gone and he wasn't afraid any longer.

Riemann looked up. He was a little man and he hadn't shaved in weeks. There were lines of desperate weariness on his face. He looked tired, more tired than any man had a right to be. Only his eyes were alive. They were blue and gentle and they twinkled with a kind of glow that never faltered.

"Hello, nephew," Riemann said. "I see you got my message."

"Yes," Red Johnson answered, taking the outstretched hand. "I brought you a flier. This is Dave York."

York knew that Riemann's eyes went over him and through him. Riemann seemed pleased with what he saw. He smiled and held out his hand. "I'm glad to meet you, David. I take it you have come to join us?"

"Yes," the flier said. "With this reservation: If what I find here, satisfies me, I have come to join you. If it doesn't satisfy me, then I shall not join you."

IT WAS a blunt statement and it made Red Johnson look nervous. Riemann smiled. "That is fair enough," he said. "Come. I'll show you what we have here."

He led them through a narrow door into another room. It was a natural cave, almost as big as a hangar. It was brightly lighted. There were twenty or thirty men here, so hard at work that they did not even look up when the three entered. Like Riemann, these were bearded men and again like him, they looked desperately tired, as if they had been fighting a losing battle against time itself. But it was not the men who held York's gaze. It was the objects on which they were working.

The objects looked like torpedoes, except they were larger. They looked like plane bodies, but they had no wings. They were motorless, but in the clear, glassed-in nose was a seat for a pilot, and in front of this seat, a strange but deadly-looking weapon pointed a blunt nose forward.

"Do those things fly?" York gasped.

Riemann nodded smilingly. "We tested our first model thoroughly. It certainly flew."

"But how?" the flier demanded. "They don't have wings, they don't have motors!"

"I know," the inventor answered. "You are looking at the first practical rocket ships ever designed."

"Rocket ships!" York whispered. He knew that a great many experiments had been carried out in investi-

gating the rocket principle. The Italians were reported to have built a plane that utilized rockets for extra speed but apparently they had not done much with the idea. The plan had been to use the rockets as an auxiliary. Riemann had gone farther than that. He had developed a ship that actually flew by rocket power.

"You understand, these are crude ships," the inventor said. "I might add that they are dangerous. They are light and fragile and I suspect, under actual operating conditions, we will discover that we have made a thousand mistakes. But they are the best we could do with the time and the facilities at our disposal." He sighed.

York was examining the nearest torpedo-shaped ship. The construction was obviously flimsy. It was made mostly of aluminum and magnesium.

"Where did you get these metals?" he asked. An A-1-A priority rating was necessary even to *look* at aluminum and magnesium.

"Do you really want me to answer that question?" Riemann asked.

YORK glanced at the man, wondering why he made such a statement. "I certainly do," the flier answered.

"There are some things that you may find it more convenient not to know," the inventor persisted.

"Are you trying to save my neck?" the flier demanded. "You think, when this is all over, I may find it safer not to know where you got your metals?"

"Frankly, yes," Riemann answered.

"I'll worry about my own neck," York answered. "I want to know where you got all this aluminum and magnesium."

"We stole them," the inventor answered.

"You—you stole them!"

"There was no other way to get them and we had to have them," Riemann answered steadily. "Yes, if they want to, after the war is over, they can hang me for a thief. But I would do it again!" Animation sounded in his voice. "I would steal and lie, and yes, I would even commit murder, if I had to! And if this is treason—" His voice went into abrupt silence.

In that silence York heard Red Johnson say, "We stole a motorcycle, Dave."

"I know we did," the flier answered. He looked full at Riemann. "I would steal it again, if I had to."

"Thank you," the inventor said. "I take it you forgive this theft?"

"Yes. But that doesn't mean there are no other questions you have to answer. What kind of a gun is that in the nose of these rocket ships?"

"That," said Riemann, "is the secret weapon." His voice changed and a happy light came into his eyes.

"Tell me about it," York said bluntly.

"The newspapers called it a radium projector," the inventor answered. "But they were wrong about that. Because I compared the effect it produces to the disintegration of radium, they started calling it a radium projector."

"How does it work!" York asked.

The inventor scratched his head. York knew he was asking a tough question, one that was probably impossible to answer. Riemann tried to answer it. "The weajon projects a beam of radiation," he said. "When this beam strikes a metallic object, the effect is to accelerate the action of the forces normally present in the metal that cause it to disintegrate."

YORK nodded. He followed the explanation this far. But Riemann immediately went farther. York stopped nodding. The inventor was talking pure mathematics now, was dealing strictly in equations and in-

volved formulae governing the properties of both matter and radiation. York held up his hand.

"I give up," he said. "I'll take your word for it that the thing works."

Riemann sighed. "I'm glad of that," he said. "Frankly, I'm not too certain of exactly what does happen. I stumbled on to the process quite by accident and I have never been able to arrive at a complete understanding of the actual principle. I know it is something new to science. The important thing, as you say, is that it works." He smiled at the flier. "Does that answer all your questions?"

"All but one?" York said.

"And what is that?"

"There is a rumor going around that you were in contact with the Japs, that the Japs knew you were going to blow up those two battleships. Is that rumor true?"

If it was true, he knew Riemann would not be likely to admit it. He asked the question because he wanted to see how the inventor would react. York watched Riemann like a hawk. He knew, if the scientist was actually a traitor, that he had put his own life in forfeit by asking this question.

Riemann winced like he had been struck a solid blow. "Is that what they are saying about me?" he whispered.

"That's what they're saying," York answered.

"It isn't true," the scientist said.

"No?" York was driving his questions home, demanding an honest answer. Out of the corner of his eyes he saw that Red Johnson was staring at him with a hurt look on his face.

"No!" Riemann said. "There was treason all right, but I was not the party who was guilty of it."

"There was?" York exploded.

"Yes. One of the men working under me was unquestionably a Nazi agent. He deliberately sabotaged my weapon, so that it destroyed the two battleships on which it had been installed. There, sir, is the true explanation."

Riemann panted as he spoke as though the effort left him near exhaustion. York was watching him closely. So far as he could tell, the scientist looked like an honest man.

"If this was true, why didn't you report the matter to the proper authorities?" York persisted. "Why did you run off and hide?"

THE inventor spread his hands in a helpless gesture. "Would they have listened to any explanation I could give? After the fleet was gone, would anyone have listened to me? I think not. They would have hanged me, but no matter what story I told them, no one would have believed me. That's why I came here and hid, so I could build three or four secret ships, and when the time came, so I could show the whole world the truth."

In the cavern his voice rang harshly. The tone was bitter and on his face was a haunted, desperate look. Riemann had suffered and had hid his suffering in silence. He looked imploringly at the flier, as if begging him to believe. "I am telling the truth," he said. "I have no way to prove it. You will have to take me at my face value, you will have to believe in me."

"No," said the flier.

"You mean you don't believe me?" the old man faltered. In that split instant, he seemed to grow older.

"I didn't say that," York said hastily. "What I meant was that you do have a way to prove that you are telling the truth."

The scientist looked helpless. "I have no witnesses," he said. "I have no evidence of what happened."

"You don't need any witnesses."

"Then how can I prove I am telling the truth?"

York pointed toward the nearest torpedo-shaped flier. "You say that ship will fly and that the gun mounted in the nose is your secret weapon?"

"Yes. But how can that prove my integrity?"

"By letting me fly one of the ships, by letting me shoot the gun," York said fiercely. "If I am behind the gun, I *know* it will be aimed correctly, that it will be used against the enemy, not against our own forces. That's how you can prove your story, Riemann: by letting me take one of those ships out of here, and use it to fight the Japs!"

York's voice was hot with suppressed emotion. His eyes dug into the scientist's face. If Riemann was really a traitor, if these ships had been designed and built to give America a secret and killing stab in the back—and York did not know that this was *not* their purpose — Riemann would certainly not let him fly one of them. If the inventor was lying, if he was putting on an act, if he was trying to gain another stooge, the way he answered this question would prove it. York held his breath and waited for the scientist to speak.

Relief flooded the inventor's face. "Why do you think you were brought here?" he asked.

"You mean you'll let me fly one of these jobs?"

"Of course. You were brought here for that purpose."

In the silent cavern the only sound was that of men hard at work putting the finishing touches to the sleek ships hidden there, the buzz of motors, the clatter of riveters. York was conscious of the sounds. While he talked to Riemann, the men here had never stopped working. He took a long time to answer, fumbling for the words he wanted to say. Then the words came.

"I would like to apologize, sir," the flier said, "for doubting you."

He was aware of two things, that Riemann was smiling at him and that Red Johnson was pounding him on the back until he felt as if he was going to break in two.

CHAPTER V

The First Attack

YORK was awakened from sleep by the pressure of an arm on his shoulders. Sleep had been vitally necessary. He and Red Johnson had been going for too many hours to be at the peak of efficiency needed to operate one of the rocket fliers. As he opened his eyes he could hear a loud-speaker going somewhere in the caverns.

"What is it?" he said.

"It's come!" Red Johnson answered. He nodded his head toward the sound coming from the radio. "Listen to that!"

The radio was tuned to an eastern station, all local stations were off the air. The announcer was slightly hoarse.

"SPECIAL BULLETIN.—The Jap fleet that attacked Los Angeles over an hour ago is now reported to be putting landing forces ashore. Special armored landing barges, discharged through the sides of transports, are racing to the beaches. They are being met by shore defenses, but it is known that the invaders have succeeded in getting tanks to land. The whole area is covered with fog but it has been definitely established that the enemy has a line of transports lying off the beachheads that are being attacked. Meanwhile the shore defenses are being subjected to

a harrowing fire from destroyers and cruisers. Somewhere farther off shore are at least three and maybe four aircraft carriers—

"Flash!—Word has just come in that one Jap carrier has been sunk. American bombers, diving through a hell of anti-aircraft fire, succeeded in scoring direct hits with heavy bombs. The carrier capsized and sank immediately."

"Chalk up one for our side!" York said. He and Johnson were already running toward the main cavern, from which the sounds of the broadcast were coming.

"H-how did the d-damned Japs get to Los Angeles so quickly?" Johnson stuttered. "The f-fleet we saw couldn't have got there so soon!"

"Maybe we saw only part of the fleet," York said. "There must have been another fleet that we didn't see."

In the cavern the loudspeaker was going full blast but not a man was paying any attention to it. When York had first seen them, they had been working. They were working still! Riemann was working with them. When they entered he glanced up and nodded at them and went on about his task. There were ten or fifteen additional men in the cavern now, guards apparently called in from outside.

"We brought the sentries in," Red Johnson said in confirmation. "We don't need guards *now*."

Two of the torpedo-shaped fliers were drawn up in front of a heavy door that formed an exit from this underground hangar. Every available man was working on the other two.

"We hoped," Riemann stopped long enough to say, "to have another forty-eight hours before the enemy attacked. We would have had all the ships finished by then. If we had them finished now—"

If! America had been cursed with *if* ever since the war started. This was the hour of final testing. After tonight, everything would be too late.

RED JOHNSON rolled open the cavern doors. Outside was the dim light of dawn. The sky overhead was filled with a roar of sound. York cocked his head to one side and listened. He recognized that sound and his heart leaped.

Planes overhead! American planes heading south. From all up the coast they were converging on the Los Angeles area, to help repel the invader.

"Those damned Japs will get a warm reception!" York said grimly.

He wondered if he was right. The reception would be warm all right, but would it be hot enough? There was no way to know. Only the future could answer that question, the next few hours. The planes droned through the dawn sky.

"How long will it take us to get these babies into action?" he said.

Riemann came up. "The first two are ready now," he said. "But first, you must familiarize yourself with the controls."

"Damn the controls!" York said. "If the thing will fly, I can fly it."

He was eager to be into action. The sound of planes in the sky fired his blood. Fliers were going down to Los Angeles to fight and he wanted to go with them.

"I'm sorry," the inventor said. "But these ships are not planes and the controls are not the same as in planes. You will have to wait until we show you how they work."

"How long will it take?"

Riemann looked like a man with the responsibility of the world on his shoulders. "If this were peace," he said, "I would insist you take at least a month.

But now—thirty minutes—"

The flier groaned. But he fully understood why Riemann looked so haggard. Thirty minutes to learn how to fly an entirely new type of ship! It couldn't be done.

It had to be done!

As he listened to Riemann's explanation of the controls and the operation of the ship, York noticed that Red Johnson and two other men were also paying close attention. The other two men, he gathered, were to fly two of the rockets. He looked at Johnson. "What are you watching this so closely for, Red?"

"I'm going to fly the fourth ship."

"You!" But you don't have any training!"

"I've been up in planes a lot," Johnson said defensively.

"As a passenger! Red, you can't do it. You'll kill yourself."

"Can't help that," the gunner shrugged. "Somebody has got to do it, and I'm nominated."

The big flier gritted his teeth. The gunner was mad, he was committing suicide. But there was something heroic in his madness. York new that argument was useless. He put his hand on Johnson's shoulder and his fingers dug into the muscles. "Red—oh damn it, Red—"

"Hell, Dave," the gunner said. "I can fly one of these kites. All you have to do is to give her the gas and keep giving it to her. Hey!" Johnson's voice changed. "Be quiet everybody. I thought I heard something."

THE sound of motors had gone from the sky. The dawn air was cool and quiet. Somewhere in the vague mistiness a voice was calling.

"David!"

York was startled. Here in this isolated place, somebody was calling his name. He was aware, as he listened for a repetition of the call, that the men were glancing uneasily at him.

"Somebody calling you, bud?" Macey, Riemann's gaunt-faced assistant asked. With a start, York saw that Macey had pulled a heavy pistol out of his pocket. He wasn't pointing the gun at York, but he was holding it ready.

"I—I don't understand it," the flier answered.

"Neither do I?" Macey said. The tone of his voice indicated he had damned well better understand it, quickly. "You came here with Red and you were supposed to tell no one where you were going."

"I didn't tell anyone!" York said hotly. Riemann and his helpers were hunted men. The flier knew they would be suspicious of anything that was not strictly on the level.

"Then how does it happen that someone is calling your name around here?" Macey said. "Nobody knows you're here, except us."

"I can't explain it," the flier answered. Oddly, he knew now how Riemann must have felt when the inventor was unjustly accused. Riemann was keeping strictly silent.

"Maybe there is another David around here," York suggested. "After all, it's not an unusual name."

It was the only possible explanation he could think of. Macey looked doubtful. "Well, maybe," he said.

The voice called again. This time there was no doubting who was meant.

"David!" the voice called. "David York!"

"I suppose you'll try to tell us now that he doesn't mean you?" Macey said.

"No!" said York angrily. "And that isn't a *he.*" He shouted an answer.

"You damned fool!" Macey gritted. "I'll blow you so full of holes—" He brought up the gun.

Riemann spoke for the first time. "Wait," he said.

"Damn it, sir, this man has betrayed us!" Macey said angrily to the scientist.

"Wait. We will see," Riemann said.

"All right," Macey gritted. "You, York," he said to the flier. "You stand still. If you make a move that doesn't look right, I'll shoot you down like I would a mad dog. And get your hands up."

Stiffly, the flier lifted his hands. He started to protest but Macey angrily told him to shut up. He waited. A few minutes later a figure appeared in the dim light. It looked uncertainly toward the group of men standing in the cave entrance, then recognizing one of them, ran toward him.

"Don't you move," Macey said to York.

THE flier had already recognized the voice. He knew who was coming. It was Rita Harvey.

Her dress was torn and dirty, there were smudges of dirt on her face, and she looked to be on the verge of exhaustion. She saw York with his hands lifted, saw the gun covering him, and stopped abruptly, to stare at the group in dismayed surprise.

"W—what's wrong, David?" she whispered.

"How did you get here?" the flier asked.

"I—I—" She seemed unable to continue.

In the chill silence, York heard the click of a safety catch being moved.

"I followed you!" the girl said.

"You followed us!"

"On a bicycle. I saw you take the motorcycle but you were gone before I could call to you. A bicycle was all I could find. You were going so slowly because of the darkness that twice I almost caught up with you. Last night I lost you but I heard your motorcycle stop and I knew you were somewhere around here. I've been hunting for you ever since. David! What's wrong? Who are these men?"

York didn't answer. He turned to Macey. "Does that satisfy you?" he demanded. "She followed us. Is that enough of an explanation?"

"No," the assistant said. "Who is she?"

"Her name is Rita Harvey and she is a nurse. We aren't engaged but we would be if—if this damned war was over. Does that satisfy you?"

Macey did not relax his grip on the gun. "Red," he said to Johnson, "do you know this girl?"

"Yes," the gunner answered.

"Could she have followed you?"

Johnson hesitated. "I—I don't know," he said.

"Damn it, Red!" York exploded. "You know she could have followed us."

"Sorry, Dave," the gunner answered evenly. "I kept a close watch to see if anyone was following us and I didn't see anyone."

"But she was on a bicycle."

The gunner did not answer. He looked at the ground.

"Did you tell her where you were going?" Macey continued, looking at York.

"I didn't know where we were going until we got here!" the flier shouted. "Damn it, will you listen to reason? How could I tell her where we were going when I didn't know myself?"

"That's right," Red Johnson said quickly, relief in his voice. "Dave didn't know. I didn't tell him. He couldn't have told her."

WHEN Johnson spoke a little of the harshness went out of the faces of the watching men. Even Macey seemed to look a little less hostile. He dropped the point of the gun until it was no longer pointing at York. "Well—" he said hesitantly.

"David didn't tell me where he was going," Rita Harvey spoke. "I don't know what this is all about, but all David told me was that he was going to help a man named Riemann win a war!"

In the silence that followed, someone laughed. Riemann looked pleased. Macey started to grin.

"All right," he said, putting the gun in his pocket. "If York told you he was coming here to help win a war, I'm satisfied."

The next instant she was in York's arms. "Kitten! Kitten!" he was whispering. "Why did you follow us?"

"Because something happened that I think you ought to know about," she answered.

"What?"

"After you left, Lieutenant Haake asked me what you were going to do. I told him what you had said. He became very excited, and started to follow you. I followed him. He went into an alley and into a small garage. I listened at the back. David, Haake was using some kind of a small radio transmitter that was hidden in the garage."

York listened in incredulous dismay to what she was saying. If Haake was using a secret radio transmitter, it could only have one meaning!

"Who was he talking to?" the flier demanded.

"I don't know," the girl answered. "He said the first attack would be delivered against Los Angeles, but that this was only a feint, designed to draw American planes down the coast and that the main attack would be delivered here in San Francisco. He was talking about some big surprise that had been planned and he said to get ready to spring it. David, I don't know what this is all about, but have the Japs already attacked Los Angeles?"

"I'll say they have!" York groaned. Riemann, Johnson, Macey, and the others were clustered around him, listening to the girl's story.

"That Jap attack on LA is a feint," he said. "The big push is coming here. How long will it take you to get these rocket ships ready to fly?"

"Two of them are ready now," Riemann answered. "Who is this Haake?"

"A spy!" York answered.

"And what was this surprise he was getting ready to spring?"

"I d o n ' t know," the flier said. "Come on, man. We've got to get these ships in the air *now!* There aren't enough planes left in this area to stop a mosquito-boat attack. If anybody is going to stop those Japs, we've got to do it!"

ALL too well he remembered the motors that had droned through the sky heading south to help defend lower California. The Japs had planned with exceeding cleverness. The attack on Los Angeles would fail. The Japs would not care. It was intended to fail. They were willing to sacrifice two or three carriers and unnumbered thousands of men in order to gain the advantage of surprise.

"Kitten," he said huskily. "You have done us a great service in bringing us this news."

She looked tired to the point of exhaustion but the smile on her face was steady.

Already Riemann's men had gone back to work on the last two ships. The first two were ready, waiting for

pilots. York started toward the nearest one. Simultaneously he heard two sounds.

One was the voice of the announcer coming from the loudspeaker in the cavern. The announcer was frantic.

"SPECIAL BULLETIN: —Rumors reaching here indicate the possibility that a large Jap fleet is off San Francisco. A fragmentary report from a scouting plane suggested presence of Jap force here. The plane that made the original report was apparently destroyed by enemy action. However the presence of any Jap fleet off Frisco is entirely unconfirmed."

"Flash:—Another Jap carrier sunk at Los Angeles. American bombing planes, moving into this area in swarms, loosed a torrent of destruction on the carrier, sinking it immediately. Although it is far too early to forecast the outcome of this battle, there are indications that it is not going well for the Japs and there is a distinct possibility that they have bitten off more than they can chew."

If anything had been needed to confirm the information Rita Harvey had brought, this newscast provided it.

The second sound that York heard came from outside the cavern. It was the harsh rattle of a sub-machine gun firing straight into the entrance! Bullets screamed through the air. Jerking Rita down with him, he threw himself on the ground.

CHAPTER VI

Sabotage

RAT-TAT-TAT-TAT—

A machine gun splashed bullets into the mouth of the cave.

Rat-tat-tat-tat—

A second machine gun joined the first.

Macey and Red Johnson had also flung themselves on the ground. Riemann was inside the cave and out of sight. York saw Macey roll over, pull a gun out of his pocket, glance once at him, then start shooting. In the east the tops of the mountains were gray with the light of the coming day. The mouth of the cave opened out at ground level into a little valley, which was still clogged with night mist.

Through that mist a line of men came charging. They raced into the cavern, shooting at anything that moved. Sounds of resistance came from within, scattered shots, curses, screams. The machine guns rattled and the shots and the curses died. Other men came charging out of the mist. York found himself looking into the muzzle of a gun.

Resistance was useless. He climbed to his feet and lifted his hands.

"Who the devil are you?" he asked the man who was holding the gun on him. The man was dressed in civilian clothes. He didn't bother to answer. York was quickly searched and shoved against a wall. Red Johnson and Macey were lined up beside him. Johnson looked hopelessly bewildered and Macey seemed to be dazed. Blood was running down the side of his face from a groove in the side of his head. He glanced at York and there was burning hatred in his gaze.

"Damn you—"

"You don't think I brought these thugs here?" York said. He stopped. The attackers had stiffened smartly to attention. Their leader was approaching. He came through the mist and the flier saw who he was.

"Haake!" he whispered. "Damn you! How did you get here?"

Lietenant Haake was so pleased with himself that he could smile. "I followed your inamorata!" he said.

"You followed Rita?" York gasped.

"Certainly. We tried to follow you but we lost you. Then she came along, hurrying after you, so we followed her. She brought us here. Very neat, eh?" Haake was in an excellent humor.

"You dirty traitor!" York gritted. "You're wearing an American uniform. You'll be shot for this!"

"Will I?" Haake answered. "I grant you that I have been wearing an American uniform but that scarcely matters now, does it?"

"What the hell are you, a Jap?"

"Don't you call me a Jap!" Haake snapped. "I'm a German. I was brought to this country as a child and I have spent my life here in preparation for the task that lay ahead. When Japan joined us, we knew that victory was not far off."

HAAKE was a Nazi! It was not so much this news as the revelation of the devious planning that had been y e a r s in preparation that stunned York. An infant planted in a foreign land to grow up and become a spy, there was German thoroughness for you!

"When Rita told me you had gone to help a man named Riemann win the war, I knew the time for which we had been waiting had come," Haake continued. "One of our operatives succeeded in sabotaging Riemann's secret weapon when it was tried on the battleships of your erstwhile Pacific Fleet and we knew then that Riemann had something, but unfortunately he disappeared and we were unable to discover where he was hiding. We knew, however, that he had a nephew by the name of Johnson and we anticipated that he would try to contact this nephew. We discovered a letter to this nephew was waiting for him here in Frisco and we abstracted this letter and read it, but it did not reveal Riemann's whereabouts, except in a series of directions that only the nephew would recognize. Consequently we had to wait for Johnson to put in an appearance. When he got the letter, he would in all probability go directly to Riemann, and we would be able to follow him. That was our plan. Neat, wasn't it?"

Haake glowed. He was completely pleased with himself. And he had good reason to be pleased. It was his underground work that in her hour of trial would provide the means of throttling America.

"No doubt these little weapons will come in very handy," he said, glancing toward the rocket fliers. "They will be useful to secure the defeat of the rest of the country. The Japs will, of course, take the Pacific Coast. But with these ships, we will strike at the industrial heart of the country, the steel mills of Pittsburgh, the factories of Detroit, and you Yankee Democrats will soon find yourselves without the means to resist our glorious Leader."

His men herded the others out of the cave. Riemann came out and now the inventor not only looked tired, he seemed to be sunk in hopeless depths of gloom. All of Riemann's men did not emerge. Some of the slugs from the machine guns had found their marks.

"I'm sorry, David," Rita whispered. "I—I didn't know anyone was following me."

"It's not your fault, kitten," York said. "Those Japs haven't t a k e n Frisco yet. They may find, in spite of all their smartness, that they have bitten off more than they can chew."

As he spoke, the loudspeaker started again. The announcer sounded choked.

"FLASH:—A strange fog is appearing in San Francisco."

The radio cut off. Haake grinned. "Well, that's that," he said.

"What the devil are you talking about?" York demanded.

"The fog," Haake answered. "It isn't exactly a fog. Ah, listen to that!"

THE radio had cut on again. "The fog in San Francisco has been definitely determined to be a new type of poison gas. It is being released from within the city itself. The Japs have been preparing for this moment for years. The gas is being released from thousands of hidden generators all over the city and the suburbs. Jap saboteurs had concealed the gas generators, and even though the aliens have been evacuated from the city, they had apparently planned to release the gas at a given signal. *Thousands already dead in San Francisco.* Every human being in the vicinity is threatened with death—"

"That," said Haake in a satisfied tone of voice, "is our big surprise. When the Japs land, they will be equipped with gas masks. Now how are you loud-mouthed Americans going to defend yourselves?"

"We're probably not going to defend ourselves," York answered. "But we're going to try—*like this!*"

Haake, standing not five feet in front of him, had lowered the muzzle of his sub-machine gun. Haake's men were busy searching the cave for anyone who might be hiding. York leaped. He struck down, at Haake's wrist, with the side of his fist, a blow intended to paralyze the arm.

The machine gun thudded on the ground.

"Help!" Haake shouted.

There was a surprised, paralyzed expression on his face. He looked like a man who has been bitten by a dog he has been beating and who cannot understand how the dog would dare to do such a thing. York struck upward with all the strength in his body and the pained expression on Haake's face became one of startled horror. Haake fell backward and York leaped over him and toward the nearest ship.

To hell with Haake! What he wanted was one of those ships!

As he ran toward it, he saw one of the Nazis emerge from the cave in answer to his leader's call for help.

"What is it, sir?" he began. Then he saw Haake on the ground and York racing toward the rocket fliers. His eyes popped open in surprise. He did not know what was happening but he knew that this was certainly not on the schedule. He jerked up his gun.

"Halt!"

York didn't stop. Yanking open the door of the ship, he dived inside.

Rat-tat-t-at-tat—

York was stunned to find himself still alive. He had heard the machine gun let go. At this distance, the Nazi simply could not miss. The stream of bullets from the gun should have mowed him down. He glanced back.

The Nazi was slowly falling. He was crumbling, going down a joint at a time.

Red Johnson was lying on the ground. He had Haake's gun in his hands. It was centered directly on the Nazi. Smoke was still swirling from the barrel. It was Haake's gun that York had heard let go. Red Johnson had grabbed it and was using it on the Nazi.

RIEMANN and his men, who had been lined up against the wall under the threat of Haake's gun, were going into action. They were leaping away from the wall, Rita with them. But—they were weaponless. There was nothing they could do. York saw

another Nazi appear in the mouth of the cave.

Red Johnson rifled the man down. Another appeared. Then three at once. These were shooting as they came.

York was desperately trying to start the rocket motors. Riemann had carefully explained how to start the blasts. York pressed the buttons. Machine gun fire leaped toward him from the Nazi saboteurs. Slugs s c r e a m e d against the aluminum.

Red Johnson let go again and the slugs abruptly stopped.

"Get that ship in the air, Dave!" Red Johnson was screaming at the top of his voice. "Blast her out of here! Roll her away!"

With a shuddering roar, the rocket blasts let go. The ship leaped outward, driven by the fury of the explosions. York was jammed back into his seat by the speed of the acceleration. He was vaguely grateful to Riemann for padding the seat and providing a support for the head of the pilot. Otherwise he might easily have suffered a broken neck. He fought the ship into the air.

Riemann had said that the controls on these ships were not the same as the controls on a plane and York speedily discovered w h a t the inventor had meant. The ship responded instantly to its controls, much faster than a plane would. York had flown fast pursuit ships that were all motor and little else. This rocket plane was faster than the fastest pursuit ship, and infinitely trickier. It lived on speed and speed alone. He pointed it at the sky and it went upward at a pace that almost took his breath away. It lifted out of the little valley like a comet heading for hell, up to the mountain tops, up above the mountains, up into the light of the rising sun. York brought it to level flight, circled with it, looped it. He was risking his neck and he knew it but he had to learn the feel of the flier.

He was wasting time here in the sky, wasting lots of time, but he had to waste it. He had to learn how to fly the ship. By the time he had learned enough to feel fairly safe, his body was wet with perspiration.

HE HAD a ship! Whatever happened down there in the cavern, York had a ship. York did not in the least doubt but that Haake and his men would swiftly overcome Red Johnson and the inventor's assistants. Desperately he wanted to go down and help them in the fight but he knew he couldn't turn the deadly weapon in the nose of the ship loose on the Nazis without destroying his own friends.

His job—and Red and Riemann and Macey and Rita and everyone else trapped in the cave would want him to do it—was to forget them and hunt for that Jap fleet lying off the coast.

He pointed the nose of the flier toward the west and opened her wide open. With a sound like the roar of a tornado, the rocket ship went through the sky.

Frisco on its seven hills lay below him. Even from his height, he could see the greasy-looking fog that lay on the city. It was not a heavy fog, just a thin greasy mist on the streets. He could not see the people but he knew what was happening down t h e r e. Death was riding the wind through San Francisco.

A line of Jap transports was lying off the Golden Gate. Barges were crawling ashore from them. Farther out were cruisers, aircraft carriers. Jap planes were in the air. Bombs were falling on the bay fortifications, and farther inland, on landing fields. American planes were in the air too, the local interceptor squadrons, and the

sky was twisting with dog fights.

One of the prophets out of the old time, looking forward to Armageddon, might have visioned a scene such as this.

York's eyes narrowed to gray slits when he saw the gigantic battle going on beneath him. It wasn't really a battle. There wasn't enough opposition to the Japs to make a fight out of it. He pressed the firing button on the little weapon in front of him, a testing shot. A bolt of white radiation flamed out. Even in the daylight, the lance of fire was visible.

"The damned thing works!" he thought. But would it work efficiently enough to destroy even one ship of the huge fleet below?

He didn't know the answer. Riemann thought it would work, but even Riemann didn't know for sure. The only way to find out was to try and see.

He went over the first Jap carrier at a height not greater than fifteen hundred feet. At that altitude he would have been soft pickings for the carrier's anti-aircraft batteries, if he hadn't been traveling so damned fast that the Japs did not see him coming until he was gone. The rocket flier had speed to beat the wind. He was doing seven, maybe eight hundred miles an hour when he passed over the carrier, too fast for the defensive guns to be trained on him.

He caught the carrier in the crosshairs of Riemann's secret weapon, and pressed the trigger.

The fire lance darted downward, struck the deck of the carrier.

And nothing happened! The beam of a searchlight would have had no more effect. A fighter plane was racing down the flight deck, preparing to take off. It took off. The carrier continued to surge ahead into the wind.

York's heart dived down into the bottom of his shoes. Riemann's secret weapon had failed!

MILES away he lifted the ship into the sky and looked back. He could make out the grim outlines of the carrier, the crazy side arrangement of her funnels that was the Jap idea of efficiency. He came back over her again, twenty thousand feet high this time, and looked down. His eyes widened and a second later he was screaming at the top of his voice:

"It worked!"

The flight deck of the carrier was gleaming with a white light. Starting in the spot where the fire lance had struck, the light was spreading. It was not an incandescence, it was a dull white glow that was growing larger in size every second.

The carrier veered suddenly, out of control.

The flight deck collapsed. The glow appeared now in the heart of the ship, following metal partitions, following the ribs, following metal wherever metal was found.

There was a violent explosion as the glow reached the metal of the boilers, ate into them, weakened the walls. The high pressure steam blasted outward to freedom.

The carrier broke in the middle and each end sank separately. Only when the water lapped over it did the glow stop. Water would stop the disintegration, water in tremendous quantities. Otherwise it would keep on spreading until it had consumed all available metal.

Although he couldn't hear them, York knew that the air was hot with Jap radio communications.

"What happened to honorable carrier?"

"Regret that this lowly one must report to honorable admiral that one car-

rier has been sunk."

The war lords of Nippon must have seen the first flash of lightning that goes before the storm.

"Honorable carrier gone to the bottom."

They must have flinched a little when they heard the news. They must have wondered a few minutes if everything was going right. However, they had lots of carriers. They had been building them secretly for years, getting ready for the day when they would hit the land that had taught them how to build carriers. If a few thousand of their men died when one carrier went down, that didn't matter either. They had lots of men. They had been breeding them for one purpose, to die for Japan. They were dying.

There were Jap planes in the air around him, but York didn't give two hoots in hell for them. He could fly under them and over them and circles around them. Riemann's flier had the wings of the wind. York didn't try to fight the Jap planes. They didn't matter. It was the ships of the fleet that he wanted, battleships, carriers, cruisers, transports.

One man and one ship could destroy a fleet, if that man had a weapon years ahead of its time. One modern destroyer could have smashed the Spanish Armada.

LOOKING toward the shore, York knew that it was not going to be one man and one ship against the whole Jap fleet. Another rocket plane was racing through the air toward him. That could only mean that Riemann and his men had overcome the Nazis in the cavern and had launched another flier. Forgetful that the other pilot could not hear him, York roared a greeting.

The ship came straight toward him. A fire lance leaped from its nose, drove a beam through the air that missed him by inches.

"Holy hell!" he gulped. "Hey, you damned fool, quit shooting at me. I'm on your side."

The rocket plane was coming too fast to change its direction. It drove past him and he caught a glimpse of the figure hunched up in the pilot's seat.

"Haake!"

The Nazi saboteur was flying the second ship. York was so startled he could not believe his own eyes. It simply wasn't possible for Haake to be piloting one of Riemann's rocket fliers unless—unless Haake and his companions had captured every one in the cave!

York jerked his ship almost straight up. Haake's flier swept on, then abruptly veered upward as the Nazi agent fought the controls.

"Damn you, you ought to have got me the first time!" York said grimly. He pointed the nose of his ship down.

Handling these rocket fliers was not like handling a fighting plane. Later, when aviators had had time to study these ships, a whole new technique of sky fighting would have to be worked out. This was the first fight between rocket ships and it was strictly trial and error. Haake, when he missed his target the first time and drove on past and then tried to pull his ship up, had made the first error. York was on his tail, diving at him.

Haake never made a second error. He never had a chance to make one. York caught him as he lifted the ship up. The blasting beam of radiation from Riemann's weapon caught the tail of the Nazi ship.

Haake's ship was going up. It kept on going up. Discharge from the roaring rockets sent it toward the summit

of the sky. While the seconds raced into minutes, it went up. Somewhere up there in the sky it exploded. A blast of fire mushroomed outward. A puff of smoke bloomed in the sky.

From a height of fifty to sixty thousand feet, it fell in bits toward the waiting sea below. Haake fell with it.

YORK looked shoreward. A flight of American medium bombers had appeared and were giving the Jap transports merry hell. The planes were a welcome sight but he was looking for rocket ships. Riemann had been building four rocket fliers. Where were the other two?

When they didn't turn up, he dived toward a Jap battleship. Again Riemann's secret weapon stabbed down with its finger of light and again there was no apparent effect. But as he lifted up, he saw the dull white glow begin to spread over the dreadnaught. He didn't wait around to see what would happen.

The war lords of Nippon must have winced harder this time.

"Honorable battleship gone to the bottom."

They must have known, when the radio told them that one of their mightiest fighting units had spewed out her guts and rolled over and gone down without knowing what had hit her, that the storm had really struck. Back across the broad Pacific, back in Tokyo, Tojo, who had thought to challenge the world, must have turned pale and started to sweat, visions of the hari-kari knife before his eyes.

York knew, when he saw the Jap battleship go down, that he was watching the last great battle that would ever be fought on the seas of earth. Hereafter, if fighting came, it would be done in the skies.

York lined up another carrier for his victim, then looking shoreward saw something that made him turn quickly aside from his target.

Two black dots in the sky. Two rocket ships! Haake's men had managed to get the other two ships off the ground.

Two against one! But they apparently hadn't seen him yet. They were coming straight out from the land. York swerved to the side. If they didn't see him, if they passed on and looked for him farther out, he could lay an ambush for them. Once they passed him and he got behind them, one of them would be a dead chicken. Then the odds would be even.

The two ships were being flown raggedly. At a distance of half a mile they went by him without seeing him. He dived after them. They started to dive and he followed them. He was ramming power into the rockets and the acceleration was jamming him into the padded seat. He was rapidly overtaking the two fliers. They seemed oblivious of his presence. They were still diving. Below them lay a Jap carrier.

At the same instant, both of them dived at the carrier. Twin beams of light flicked down, lanced across the deck of the carrier. The two ships lifted raggedly out of the dive.

"They're attacking their own ships!" York thought in amazement. "What the hell is this, anyhow?"

He rammed power into his own flier, drew up until he was flying alongside one of the rocket ships, looked across.

Red Johnson was in the pilot seat. Red Johnson saw York, waved at him. Macey was piloting the second ship. Johnson and Macey pointed downward, toward the Jap fleet.

HELL walked through the Jap armada, hell rode through the sky

above them, hell dived at them from the heavens. They thought they were attacking a practically undefended coast. They had found—this!

York lost count of the times he dived at Jap ships. He knew that anti-aircraft shells pattered the sky a mile behind him, that Jap fighter planes burned out motors trying to catch up with him, that suicide pilots tried to crash against him. The planes might as well not have been in the sky for all the good they did. They were fast, but the rocket ships were twice as fast. And Riemann's secret weapon worked!

York would have stayed on the job until the last Jap ship was gone but a gauge on the instrument panel warned him that his fuel supply was running low and he turned toward shore. Macey and Red Johnson continued and would continue until their fuel supply ran out.

As he neared the shore he saw, coming up from the south, flight after flight of American bombers. His heart leaped at the sight. Red Johnson and Macey would have help in winding up the fight.

HE SET the rocket ship down in the little valley beside the cave, rolled up to the entrance, stepped out and fell flat on his face. He did not know until then that fighting the tremendous acceleration of the little ship had almost exhausted him. He tried to sit up. Figures came running toward him. He recognized Riemann. The inventor was grinning from ear to ear. Then Rita was pillowing his head in her lap.

"How did it go?" Riemann was speaking so rapidly the words were running into each other.

"Sir," said York, "I would like to report that you have got a weapon that is a weapon!"

"But what about the Jap fleet?"

"Jap fleet?" York gasped. "Sir, there isn't any Jap fleet—any more!"

As if confirming his statement the radio inside the cave let go with a blast.

"FLASH:—The Jap fleet attacking San Francisco has been dispersed."

York grinned. "But what happened here?" he asked. "Haake was in that first ship. How did you whip his men?"

"We didn't whip them," Riemann answered. "You did it."

"I?"

"Yes. When you blasted off, Haake's men were in the cave immediately behind your ship. The discharge from your driving rockets blasted into them. We were at the side and were unaffected. Those that weren't killed were so stunned that we had no trouble taking them prisoner, but while we were doing that, Haake leaped into one of the ships and escaped. Macey and Johnson went after him. Did they get him?"

"No," said York. "But he was got just the same."

Inside the cavern the radio let go again. "Special Bulletin: — Reports from scouting planes indicate that the Jap fleet was attacked by several small wingless ships of an unknown type. We have as yet no accurate information on where these ships came from, but one thing is certain—they so disrupted the Jap plan of attack that American bombers, arriving on the scene, had no trouble in completely smashing the invasion fleet."

The announcer was going crazy. "What few Jap ships are still afloat are fleeing in wild disorder. Landing parties that reached shore are being mopped up. It's a victory, folks, it's the greatest that was ever won—"

York felt very comfortable with his head in Rita's lap. Knowing he was too weak to move, he didn't try.

« SALT VERSUS HEAT »

By Newell Watson

GOSH, but it's hotter than hades in here! Not only does that statement mean discomfort, but often ill effects.

A serious problem to many of the important industries of the country is the effect of extreme heat on employees. In mills and defense factories where of necessity high temperatures exist, the problem of heat cramps and heat prostration is especially acute. Cramps and prostration, however, are frequently met with in the hot months of summer where workers are unprotected from the direct rays of the sun, and, for that matter, even in mills where the temperature is lower than that of the outside air.

The use of salt as a remedy and preventative measure in such cases is several decades old, but only recently has its effectiveness been scientifically proved by successive trials. A recent and thorough investigation of the value of salt as a heat prostration preventive was conducted. More than five years were spent in gathering data on the physiological and pathological effects of high temperature on workmen. The following was suggested: A worker, working eight hours a day under extreme heat, should use plenty of table salt with his food and also should take five or six one-gram tablets of salt, enteric coated to prevent dissolution before the tablet leaves the stomach.

Salt tablets solve prostration problems. The tablets, each containing one teaspoonful of pure sodium chloride are available at drinking fountains in many of the factories. They are swallowed whole, followed by one or more glasses of water. Holding that the principal cause of heat exhaustion is the loss of salt from the blood stream through profuse perspiration, physicians urge shop workers to take from ten to a dozen of the salt tablets daily. Since salt tablets have been made available several important plants have not had a single case of heat exhaustion.

« "QUAKE" VALVE »

By Jack Caldwell

IF an enemy bomb won't, an earthquake might! Speaking of San Francisco, approximately 5 per cent of the damage done to that city at the time of the earthquake was due to the earthquake itself, the remaining 95 per cent had been caused by the fire which resulted from the breakage of gas pipes and gas mains.

To prevent a recurrence of this disaster, much time, study, and work has been given to this problem by engineers and architects. In regions subject to earthquakes, building codes and building methods have been radically revised to prevent as much as possible the danger to lives and property caused by falling walls. This is very significant for fire insurance policies usually have a clause stating that an earthquake may technically render the policy instantly void. Until walls can be so built that earthquakes will not topple them, the property owner is faced with the problem of preventing fire on his premises. This is often impossible because an earthquake may smash all sprinkler and water lines.

A company on the West Coast has therefore worked out a simple and most ingenious valve to be placed in the gas feeder line, which operates to cut off the gas immediately in case of earthquake or any serious shaking of the building. The valve consists essentially of a non-corrosive metal ball which normally rests upon the top of a small pin, so that when shaken, it falls to one side and seats itself tightly into a circular hole. Seated therein it effectively bars further flow of gas. The ball is attached by a small chain to a screw plug immediately above its pin rest. To reset, it is only necessary to remove the screw plug, lift the ball, and drop it upon the pin. In addition to the automatic earthquake shut-off feature, the valve is provided with a thermostatic valve at the bottom of the pin support, and, in the intervening space, a fusible metal link. Should the area surrounding the valve become heated to the danger point this control also automatically drops the ball to cut off the gas.

Truly, necessity is the mother of invention.

Scientific

NEANDERTHAL MAN WAS NAMED AFTER THE DISTRICT NEAR DUSSELDORF WHERE HIS SKELETON WAS DISCOVERED. HIS SKULL WAS UNUSUALLY THICK. HE WALKED WITH A SLOUCH.
The NEANDERTHAL MAN'S EXISTENCE BEGAN DURING THE MIOCENE PERIOD, WHILE EUROPE WAS STILL A TROPICAL JUNGLE!
JOE C. JEWELL
LOUIS AGASSIZ -- GREAT AMERICAN GEOLOGIST PROVED THAT THERE WAS ONCE A SOLID LAND BRIDGE BETWEEN SCOTLAND and LABRADOR
THE HAWK-NOSED CRO-MAGNON DESTROYED THE NEANDERTHAL BY MEANS OF HIS SKILLFUL USE OF BOW AND ARROW. THE NEANDERTHAL PERISHED BECAUSE HIS DEFENSE WEAPONS WERE TOO PRIMITIVE . .

Mysteries

THE MYSTERY OF NEANDERTHAL MAN

By L. TAYLOR HANSEN

Illustrated by Joe Sewell

Were they truly men, these brute humans who fled before the glacial age; and returned only to be wiped out by Cro-Magnon?

WHEN the continental shield of the southern land-masses, known to geologists as Ancient Gondwanaland, crashed into the northern shield, the bed of the Ancient Tethys Sea (location of the Mediterranean) was closed and its rocky bottom twisted up to make the Alps and Himalayas, India was driven like a wedge into the heart of Asia, the Indian Ocean cracked open, and South America split away from Africa along the line of the old Atlantic River as it began its westward drift.

Not that these great cataclysms, compared to which a lost Atlantis would be a tea-cup storm, came suddenly as over-night calamities. They lasted during untold milleniums of spasmodic and resurging fury, of which the late earthquakes in Turkey may be but the dying echoes. The movement went forward as a steady movement, the proponents of "Continental Drift" insist, even as the movement of a growing vine is just as much a steady movement as that of a boy in the act of tossing a ball.

Now the thunder of the African volcanoes which had announced the approach of these great land-masses, during the closing ages of the Mesozoic, was succeeded in the Tertiary by the thundering of those located in the Alps, Himalayas, Rockies and the Andes. Was the southern block of continents merely over-riding, or was it also shoving the northern block toward the north?

It would be hard to place one's finger upon the exact reason, but the climate of the northern block began to cool. Perhaps the time of mountain-building where so many new ranges were pushed up into the snow-line, was the cause. Perhaps the presence of volcanic dust in the air, thus screening off the rays of the sun, or possibly the slow drift of the northern land-masses toward the pole, aided by the other two reasons, made the time one of slowly cooling climates for the northern land-masses as the climatic bands inevitably moved south.

However, again we must think of the change in terms of untold milleniums. Animals merely grazed a few miles further south from that which has been a pasture for their ancestors, as they wandered back and forth across the land-bridge which spanned the North Atlantic.

During the Miocene, Europe was still a warm, lush, tropical jungle in which was being fashioned one of the first races of true men. He was called Neanderthal, from the district in which his skeletons have been discovered. He was not an ancestor of Modern Man, but an early branch from our stem. Nor was the Europe of his time limited by the high shore-lines of our modern Europe.

Recent research upon a certain type of buckthorne * has assured us that the continent included the Canary mountain range as the shoreline swept out toward Iceland. Furthermore, the land-bridge of Scotland to Labrador was still transporting trees across that ocean, as Louis Agassiz, the great American geologist proved when he found in the Swiss Miocene beds the fossils of the trees which are today flourishing not in Europe, but in New England.

We know that in this warm, hunter's paradise, the sea had not yet invaded the Baltic and the English Channel Rivers, while the Mediterranean River drained two inland lakes as it cut its way through the rocky Gibraltar Gorge into the narrow Mediterranean-wide Atlantic. The tear which was to become the pole-to-pole Atlantic Ocean

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** The discoveries of the breccia of Hötting near Innsbrück in the Tyrol are especially important. The site is now 1200 meters above sea-level. The breccia lies above the basal moraines belonging to the second, possibly third glaciations. ABOVE IT lies a moraine of the fourth glacial stage.*

R. Von Wettstein has enumerated forty-one species of plants occurring in this deposit. Among them is Rhamnus höttingensis, a species of buckthorne related most closely to Rhamnuslatifolia of both the Azores and the Canary Islands.

Up to recently both Lepsius and Rothplatz have held that the Hötting breccia is pre-glacial, but the recent researches of O. Ampferer have established beyond question the interglacial age of this deposit.—AUTHOR.

had not yet reached the Arctic. Wegener is of the opinion that this happened during the Ice-age.

NEANDERTHAL MAN, child of tropical Europe, was a typical tropical type. Not only his thick skull, evolved to screen his brain from the hot rays of the sun, but also his spreading nostrils and his teeth proclaim him to be such. In fact, he is better adapted for jungle life than our present negroid, because his molar teeth were evolved for vegetable foods. (It has been suggested that he chewed from side to side.)

On the other hand, our teeth being of a more primitive type, they place Modern Man (all present races of living men are included in this species) closer to the original stem. From this fact, some definite inferences may be drawn. Neanderthal Man was evolved in a hot climate where he learned to make use of grass and other vegetable foods. If this occurred in Europe where we find his bones, and that seems the most reasonable supposition, then Neanderthal Man separated from Modern Man and evolved his more highly specialized teeth during the long, tropical Miocene.

In a like manner, since Modern Man kept the more primitive canine teeth, which are instruments for meat-eating, it stands to reason that Modern Man was evolved in a cooler land where meat continued to form a large part of his diet. Such homelands might have included the Americas, Asia or the lands about the widening Indian Ocean. Wherever such homelands might have been, it is evident that Europe was not among them, and when Modern Man finally entered this country, it was in the role of an invader.

There is a tragedy in the story of shuffling, long-armed Neanderthal Man who lived to see the paradise which had nurtured him turn into an arctic land. Great mile-high walls of ice moved down from the north, grinding his forests under the crushing white advance. The steadily cooling Pliocene was giving way to the first glacial.

One can imagine the sun-loving, tropical creature, hugging the fires of his cave-home as he pulled the furs of the animals he had killed, more closely about his thick, muscular frame and listened to the legends of his story-tellers. Those stories undoubtedly told of a warmer, happier world, and Neanderthal Man, listening, concluded that the world was going to end in ice. His world was freezing up. The sun-god which once had made life so tolerable was dying. Perhaps Modern Man in his own homeland, came to the same conclusion. For surely, in its last analysis, sun-worship was originally a product of the ice-age.

YET the story of Neanderthal Man does not end in this world of ice. In some manner he was able to survive that first terrible glacial. He saw his sun-god revive. He saw his Europe warm up. The forests returned and with them the warmth loving animals. Birds again filled the trees. Then came the final and most bitter blow.

Through the forests came a new enemy—another species of men. These people were tall and handsome. Feathers were tied in their dark, braided hair, while in their hands they held a sort of curved stick from which a flying arrow brought swift death at a distance. They came into Europe upon the flanks of the herds of the buffalo and the ancient ox. But they turned their weapons upon Neanderthal Man in a war of extermination.

We call these wide cheek-boned, hawk-nosed invaders Cro Magnon Man, again from the district in France where his skeletons have been found. One of the most amazing facts is that his first race of Modern Man to enter the stage of Europe, was already a racial cross which had interbred for so many centuries in comparative isolation that it had become a separate race! Thus in the hoary past when the races of men first appear upon the stage of interglacial Europe in life and death combat, they are far more widely differentiated than any peoples of today, while the most modern type of the two showed that he was even then the result of an ancient cross.

Cro-Magnon, with his splendid skull capacity, viewed the low-browed, chinless Neanderthal creature with evident distaste, for he took no prisoners. We have some evidence that his quarry escaped total destruction however. In Spain some very good specimens have been found, showing a headlong flight toward the south. In Syria, where a skull with undoubted Neanderthaloid characteristics has been found, one meets the first suggestion that some racial mixture with Modern Man might have taken place. Did the Neanderthal Race cross the Mediterranean Valley and enter Africa? The question is an intriguing one, but for the moment, let us remain with Europe.

Here after a long inter-glacial during which the climate exceeded in warmth that of present Europe, the weather again began to cool. Tall Cro-Magnard with his relatively small woman, covered the walls with paintings of long-extinct animals, as they lounged around the campfires which burned a few feet over the ashes of those other fires which millenniums before had warmed the shuffling bodies of long-armed Neanderthal Man in this, his home-cave. And one wonders if they in turn did not view with terror this second advance of the ice, or whether their legends by now had informed them that the miracle had taken place before, but because they had learned how to "feed" the languishing sun-god, he had at last returned to full strength, and the world did not actually end in frozen death, after all.

THE END

NEXT MONTH: How Old Is Mankind?

«SO THE SAVANTS SAY!»

By Roland Birchley

WHEY TO WEIGH

WHEN all the essential materials have been taken out of our good wholesome milk, the odoriferous, "useless" substance that is left is called whey.

Chemists from the Department of Agriculture have discovered that whey contains a little protein and quite a bit of milk sugar. They have also found ways to utilize this substance.

From the milk industry over six and one-half billion pounds of whey are extracted annually—this is enough to float a navy.

This liquid hither-to wasted or fed to pigs can now be made into candy, pastry and pudding. It will be used for handbags, tanning of leather, plastics and accessories. What remains after that, since it has been discovered that whey contains most of the vitamins in milk, will be used to feed the hens, promoting their health and increased egg production.

* * *

MILKING SNAKES

THERE is in existence today many snake farms which produce snake venom to be used as an antitoxin for snake bites. The venom is produced by "milking" the snakes about every two weeks. A cup is placed beneath the snake's fangs and when the snake bites the cup, an attendant squeezes the venom glands with his thumb and third finger. The amount of venom produced depends upon the size of the snake. For example, a large rattlesnake will produce about 1/7 of an ounce of venom at each "milking."

The venom of a rattlesnake is a very complex protein compound which has many different effects on the human body. It may be used to destroy body cells or bacteria, paralyze nerves, or prevent blood from clotting. The venom is thoroughly dried until it is crystalline in appearance with a yellowish-white color. If properly sealed in glass, the crystalline venom will retain its toxicity for several years.

LIVING IN QUICKSAND

ACCORDING to a noted authority on the subject of soil, a person falling into quicksand need not die if he will only keep his head. The thing to do if he finds himself in quicksand is to keep calm and not struggle to pull out. He should calmly stretch out his arms and allow himself to sink feet first and he will stop sinking when the quicksand reaches approximately his armpits.

This revolutionary announcement is explained by the fact that a person will stop sinking when his weight equals that of the quicksand he has displaced. In fact, the quicksand, instead of destroying, will support him twice as easily as water will if he will only keep his wits about him.

It is also interesting to note that quicksand is not a substance at all but exists only in granular soils with water flowing through it. The solid particles are "fixed" in the water by the pressure of the water causing the quicksand to form.

* * *

GOLD APLENTY

CAN you imagine living in a country where gold was so plentiful that the inhabitants used it to make pins, needles, fish hooks, and nails? This was exactly the situation in Ecuador at the time of the Spanish conquests and readily accounts for the great wealth and prosperity enjoyed by Spain during the era of her empire.

Moreover, the Indians had discovered how to combine platinum and gold, an almost unbelievable feat since the melting point of platinum is above 3,000 Fahrenheit, a temperature beyond the capacity of Indian furnaces. With the discovery of articles in various stages of production, the method of manufacturing this alloy is now understood.

By burning gold dust and platinum grains in a wood charcoal fire, the Indians could melt the gold but not the platinum. After a long period of heating, the melted gold would diffuse into the unmelted platinum and cause the platinum to dissolve slightly into the melted gold. The mixture was allowed to cool and after skillful hammering would become so homogenous that it could be worked into the fine works of art that are so highly valued by collectors today.

The Love Song of

All Lt. Biggs wanted was a shipboard bouquet for his wife, but the seeds grew a little too well!

by

NELSON S. BOND

WELL, it's just like I told you. The last time you friends, dopes, and country hicks lent me your ears I said the *Saturn* was scheduled for an ordinary, routine, commonplace cargo shuttle to Uranus. But I also hunched it that inasmuch as my screwball pal, Lt. Lancelot Biggs, was treading the bridge almost anything was rather more than likely to happen.

And I was right. Only even in my wildest nightmares I didn't have any idea what was going to be chucked at us when we laid our lumbering old space-freighter down in the cradle at Sun City spaceport.

You see, the *Saturn* shuttles back and forth between the planets of the solar system, carrying everything and anything. When you carry cargoes like that, you often find yourself loaded up with plenty of trouble, and I don't mean maybe! And with Lancelot Biggs, those cargoes can *do* things!

What happened was that Johnston—he's the Interplanetary Corporation's port clearance official on Mars—came loping over to our jalopy like a hound in a hamburg orchard and closeted himself with Cap Hanson. For about a half hour they held privy council, as

Lancelot Biggs ▾

A welter of tropic growths tumbled out of the door

The Love Song of Lancelot Biggs

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clubby as moths in an all-wool suit, and when they appeared again, the hush-hush was so loud it almost deafened you.

A few minutes later, stevedores started hauling into the *Saturn's* cargo bins an accumulation of airtight, leaden containers. These workmen, too, were furtive as clergymen at a crap game, and all I could get out of them by way of explanation was the one word sentence, "Idunnonothinaboutit!"

So I hunted up Lancelot Biggs, who generally knows practically everything about practically everything, and of course I found him standing with one gangling arm draped limply about the shoulders of his brand-new bride, Diane Biggs (*née* Hanson), staring at a perfectly commonplace Martian sunset as though it were a gala world premiere presented especially for his benefit. And I complained, "Hey, Biggs! What's all the mystery about? What makes with the cargo?"

Biggs said, "Oh, hello, Sparks. Gorgeous evening, isn't it? You know, this magnificent sunset makes me think of that beautiful old Martian poem: *'To be with one's love when the scarlet orb . . .'*"

"Yeah," I said. "It's pretty, but unimportant. What I want to know is, who's hiding what from who? And if we're toting high explosives to Uranus, why doesn't the Old Man tell me so I can quit *now?*"

That got him. He snapped out of his trance and stared at me bewilderedly, his oversized Adam's-apple bobbling up and down in his throat like an unswallowed electric light bulb.

"What's that, Sparks? High explosives!"

And Diane said, "But that's impossible, Lancelot, dear. You *know* Daddy would have told us, if—"

That's as far as she got with her iffing, for at that moment the skipper himself came waddling across the field like a pint-sized tornado on toes and rasped, "All right, let's get going! Everybody aboard! Sparks, audio all hands to rocket posts and get your clearance OQ. Lancelot, set trajectory for Iapetus—and make it snappy! We're lifting gravs immediately, if not sooner."

"Iapetus!" gasped Diane. "But—but, Daddy, I thought we were shuttling a cargo to Uranus?"

"Was!" snapped the Old Man. "Not *is*. Orders have been changed. Get going, everybody!"

WELL, there are limits. I planted my tootsies in good old terra firma and said stubbornly, "Not me, Skipper. I'm not stirring a step till I know what this is all about. Why this sudden shift of destination? And what were you and Johnston sneaking around corners to whisper about? And what are those lead cubes the cradle monks have been storing in our bin?"

"I ain't got time to explain now," said the Old Man. "Every minute counts. Now run along and—"

"Ah-hah!" I ah-hahed. "So it *is* explosives! O.Q., Skipper, consider me an ex-member of the *Saturn's* crew, as of two minutes ago. Space travel's dangerous enough without lousing it up with dynamite which might or might not. My aim is to sail the spaceways in *peace* . . . not in *pieces*."

Cap Hanson's beefy face mottled dangerously, and he choked, "Confound you, Sparks, if there was another bug-pounder available I'd accept your resignation with whoops of glee. But as it is— Well, I'll tell you this much. It ain't explosives. It's something perfectly harmless but very valuable, which it's important we get to Iapetus before the Cosmic Corporation beats

us there. *Now*—will you get goin', or do I have to—?"

"Oh, goody!" squealed Diane. "A race, eh, Daddy?"

"That's right," growled Hanson. "And a mighty important one, too, with about a quarter of a million credits hanging on it."

I sniffed. "Is that all? Then what's all the rush about? The race is not always to the swift."

"Oh, no?" The Skipper glared at me. "Says who?"

"Says a guy named Aesop."

"Well," snorted the Old Man, "all I got to say is that there Ee-sop friend of your'n didn't never bet on the ponies. Now, get goin', everybody, before I—"

So we went.

SO WE went, and of course with Lancelot Biggs on the bridge handling things it didn't take long to get going. Within a half hour we'd lifted gravs from Sun City, and in three shakes of a rocket's tail, Biggs had twisted our crate's nose about and pointed it at Saturn's eighth satellite, approximately 800,000,000 miles away.

Which left me with nothing to do till Slops gonged the dinner bell, so I was just sitting there reading the latest edition of *Spaceways Weekly* when the door of my turret opened and in walked L. Biggs.

Well, call it "walked" if you want to. That overworked verb neither accurately nor truthfully describes Lanse Biggs' peculiar style of locomotion. His method of self-propulsion is a sort of cross between a sidle and a galumph. Think of a giraffe wading in oiled ball-bearings, or a Mexican jumping-bean on stalks, and you'll have some idea what I mean.

Anyhow, he came in, closed the door behind him and grinned at me triumphantly.

"Well, Sparks," he chortled, "I found out!"

"Yeah?" I snorted. "Well, now if you mosey around and find *in*, too, you'll have both sides of the swinging door, won't you? Found out what? What are you talking about?"

"Why, what you wanted to know. I found out what we're carrying to Iapetus."

My interest revived like a zombie at a Black Mass. "You did?" I exclaimed. "Finally wormed it out of the Old Man, eh? Well—what is it?"

"Seeds," said Lance.

"Huh?"

"Seeds."

I said, "Don't look now, but there must be something wrong with my ears. It keeps sounding like you're saying 'seeds'."

"That's exactly," said Biggs patiently, "what I *am* saying, Sparks. We're carrying *seeds* to Iapetus. You know, little round—"

"Doogummies," I finished for him, "with unfledged thingamajiggers in 'em. Yeah, I know what seeds are. But I'll be damned if I know why we're carrying seeds almost a billion miles across space to a hunk of rock so cold and bleak that you have to thaw out the air before you can breathe it."

"That's just it!" explained Biggs excitedly. "You see, until just recently it was thought that the climatic conditions on Iapetus made that world uninhabitable. But recently an exploration party has discovered that after you melt your way through a quarter mile sheathing of ice, the entire planet is honeycombed with a vast, connected, sponge-like series of caverns. Good, warm, habitable caverns with earth to grow things in, and—"

"Ice to cold storage them in," I con-

cluded, "after you've grown 'em. It sounds enticing—in a horrible sort of way. So who wants to live there? Snowmen?"

BIGGS said soberly, "Practically everybody who's heard about the discovery. You see, Sparks, they not only learned that Iapetus could sustain human life; they also discovered that the entire planet is one great storehouse of precious mineral ores.

"Miners, adventurers, homesteaders . . . humans from all over the solar system are flocking there as fast as they can drive their spacecraft. Iapetus is a boom planet. It's a gold rush that makes Sutter's Mill and the Klondike seem like a polite game of musical chairs."

I moaned feebly and pawed what by this time ought to be—even if it ain't—my graying thatch.

"What you're saying," I complained, "begins not to make sense faster than ever. Thousands of people flocking to the Iapetus mines with picks and shovels and dreams of wealth . . . and *we* join the gold rush with a cargo of seeds. Why?"

"But, don't you see?" explained Biggs. "Where there are mines there are humans. Where there are humans there are communities. Where there are communities—"

"People get hungry!" I burst in. "Of course! Now I get it. We're bringing them the seeds to sow vegetables with, is that it? And—oboyoboy! If we get there first, it'll be worth millions."

Because I had remembered the "most favored company" clause in the General Space Regulations, the paragraph which grants an eleven year commercial monopoly on any product to that company which first introduces any product to a newly-developed outpost of civilization.

These extra-territorial rights are the prizes for which outfits like ours and the Cosmic Corporation vie eagerly, because when you gain such a privilege it's just like finding a free pass to an eleven year ride on the gravy train.

One of the lushest feathers on our company's commercial cap is the monopoly on electric refrigerators to the Mercurian outpost, just as the deepest lines were graven on the face of our Board of Directors when the Cosmic Corporation grabbed the atmosphere-conditioning privileges on methane-blanketed Uranus.

But my glee was shortlived, for Biggs looked embarrassed. He shuffled from one foot to another like a cow in a quagmire. And—

"It's — er — they're not vegetable seeds, Sparks," he said meekly.

"Huh?" I gasped. "Then what *are* they? What other kinds of—?"

"Why—er—" said Lance, "they're flower seeds."

I SAID, "Flower seeds! Sweet howling serpents of Sirius! Curl my hair and call me a chrysanthemum! Has the whole darned I.P.S. gone lah-dee-dah? Why in the name of—"

Biggs said soberly, "Now don't get upset, Sparks. It's not so silly as it sounds. As a matter of fact, it's one of the most intelligent moves I've ever known the stuffed sh—I mean, the officials of our company to make. You see, flower seeds are a great deal more valuable than vegetable seeds."

"Oh, yeah! Sure! That's easy to prove, too. When a man's starving, just give him his choice between a loaf of bread and an orchid corsage—"

"No, Sparks, that's not the situation at all. You see, the problem here is not one of feeding the Iapetan colonists. They have plenty to eat. The

satellite is so near its mother planet that edible supplies can be imported in great quantities. And even though food concentrates are not always particularly tempting to the palate—"

"Like," I told him, "dead fish ain't always particularly pleasing to the nostrils—"

"Nevertheless," continued Lancelot Biggs, "the Iapetan miners will have plenty of food. But to borrow an expression from a wise old book, 'Man does not live by bread alone.' There is such a thing, you know, as maintaining public morale, and one of the best ways of doing this is to offer people some small but tender fragment of beauty. Something to delight the eye with its color, soften the air with its fragrance. In short—flowers.

"You know, it's like some old Indian philosopher said way back in the 20th Century: If a man has but two coins in his pocket, he should take one of them and buy 'hyacinths wherewith to feed the soul'."

"Nevertheless—" I interrupted doggedly.

"So," pursued Biggs, "our company is being very clever in hurrying this shipment of flower seeds to Iapetus. Not only because the people will love them, buy them, plant them eagerly for the pure, sensual pleasure of watching something grow—but also because there is big money in it.

"Didn't you ever hear of the famous Holland Tulip Market where fabulous prices were paid for unusual buds?* Who knows but that something like that might happen on Iapetus, and our company might make millions!"

"Out of which," I conceded grudgingly, "we might even collect a half day's pay as bonus. Well, maybe you've got something there, Lance. Maybe it *is* a good idea. But when I signed up for space service I never thought I'd end up as flower boy to a cosmic wedding."

THIS last comment elicited an unexpected result. At the word "wedding," Biggs stiffened like the feature attraction at a post-mortem. A frenzied look glazed his eyes.

"Oh!" he gulped. "Wedding! Sparks, thanks a million. I had almost forgotten."

"Forgotten what?" I demanded.

"Why, my anniversary."

"Anniversary! Are you off your beam? Why, you and Diane have only been married—"

"Two months," nodded Lancelot Biggs. "Day after tomorrow is our third anniversary." He swallowed sort of shyly, which is hard to do when your emotion exhibits itself in the frenzied leaping of a laryngial elevator. "Diane and I—well, we celebrate our wedding every month on the anniversary of the day we were married."

"And no quicker road to the poorhouse," I sniffed, "was ever macadamized. So what are you going to do by way of celebration, Romeo? Take her to the observation deck and treat her to a view of the starry firmament revolving in its courses? That's about all the excitement there is available on this crate."

Biggs had been thinking furiously, a process which is always demonstrated by the way he shuffles from one foot to another. Now he snapped his fingers.

"No—I've got it, Sparks. Something unusual. A real surprise. Something

* "Every reader possibly knows of the 'Tulip Mania' in Holland (1634 to about 1638 A.D.) when speculation in bulbs became as wild as speculation has been at other times on the Stock Market. A record price of 13,000 florins (equal to about 260,000 florins today, or $104,000 American money) is reported to have been paid during the mania for one bulb of the variety *Semper Augustus*" Gager: *The Plant World*—Ed.

that will startle and delight her."

"I know," I hazarded. "A new frock. You're going to whip it up in your spare time out of tarpaulin and old tablecloths."

"No, Sparks, I'm going to give Diane—" He paused dramatically—"flowers. Fresh flowers!"

I stared at him stupidly. And no cracks about how I couldn't very well do anything else.

"Flowers?" I repeated. "But where in blazes are you going to get fresh flowers out here in the middle of space?"

Biggs jerked a knuckly thumb in the general direction of the ship's hold. "Why, down there, of course. From our cargo bin."

I stared at him disgustedly. "Oh, sure," I drawled. "Pardon me all to hell. I plumb forgot about them. But look: aren't you overlooking one tiny detail? Those blossoms are in what is technically known as the 'papoose' stage. Which means they're only about six weeks shy of blooming. Not to mention the fact that at present they're planted in air-tight lead containers."

BIGGS shrugged easily. "Oh, *that!*" he scoffed. "A mere nothing. Haven't you ever heard of hydroponic culture, Sparks?"

"Hydro-whichic-whature?"

"Hydroponic culture," he repeated. "It's a method of growing plants artificially in tanks of water chemically treated with the constituents necessary to growth. It's very old. Over three hundred years."

"Maybe so," I granted. "But those seeds are very young. And you've only got seventy-two hours to work in. Even with artificial culture, how are you going to bring them to full bloom in three days?"

Biggs said happily, "That's the most wonderful part of it, Sparks. It so happens that only recently I have been conducting a series of experiments on plant culture. If my theories are right, I think I have discovered a way to speed up the growth of living vegetation tremendously. Of course, my ideas are still only in the experimental stage, but I'm practically certain they will work."

I said, "Oh-oh!" and started for the door.

Biggs stared at me anxiously. "What's the matter, Sparks? Where are you going?"

"I don't know," I told him, "but wherever it is, it's a long way from here. I've had experience with inventions of yours before.* If you're going to start fiddling around again with things you don't know anything about—"

"But I *do* know *all* about it, Sparks," wailed Lancelot. "And I'm almost positive my plan will work. Now, be a good fellow, will you? Help me carry one of those lead containers up to that spare chamber on A Deck, and, let's see—I'll need a tank, a quart of vitamin B extract, an ultra-violet ray lamp—"

So, you know me. Lollypop Donovan, the eternal sucker. I helped him.

BY WAY of alibi, I might as well confess here and now that I didn't think anything would come of Biggs' experiment. Oh, I know that in the past he has pulled so many bunnies out of the *chapeau* that his hat resembles a rabbit-warren. But this time I would have bet my somewhat battered immortal soul to the Black Gentleman with the Long Tail that Biggs had bitten off more than he could chew. 'Cause according to what my mama done tole me about the bees and the birds and the flowers, that biological phenomenon known as "life" requires a certain

* For stories of Sparks' experiences with Lancelot Biggs' inventions, see copies of *Fantastic Adventures* and *Amazing Stories*, 1940-1-2.—Ed.

amount of time to establish itself.

But small items like impossibilities don't feaze Mr. Biggs. He's the kind of a guy who never says die until he finds himself reporting for duty to the white-winged watchman at the Pearly Gates.

So for several hours he fiddled and diddled around with the complex array of gadgets he had accumulated, and finally he turned to me and said, with a smile of satisfaction, "Well, Sparks, there it is! How does it look?"

"It looks," I told him frankly, "like a nauseous bathtub on stilts. You mean you really expect to grow flowers in that overgrown fishbowl?"

"That's the idea."

"Well, how about the ultraviolet ray lamp? What's *that* for?"

"Why," said Biggs, "that's an important part of my new invention. It isn't . . . er . . . exactly an ultraviolet ray lamp any more, Sparks. I made a few minor adjustments on it. It now emits rays in the Hertzian range. That is, between one M and one-tenth CM in length, electrical waves for which —up till the present time—no use has ever been found. But if my theory is correct, they should irradiate the growing seeds pods with—"

"Never mind," I interrupted him hastily. "You're just wasting your breath and my time. Let's turn on the juice and see what happens."

"All right," said Biggs. "Let's have that container. What have we here anyhow? Ah! *Rosa rugosa!* They should be lovely. Diane will be delighted."

"Oh, hell!" I said. "Did we get the wrong container? Wait a minute. I'll go get one with flower seeds in it."

"No, Sparks. *Rosa rugosa* is a type of beautiful red rose. These should be exquisite. Here, I've got the seals open. Help me scatter some of these seeds carefully on the surface of the water . . . there . . . that's it! Now, the radiation—"

HE CLICKED a switch and the lamp turned on. That is, I suppose it turned on. I wouldn't know about that exactly, for it emitted no light. But it must have been emitting *something,* for it did funny things to the light already existing in the room. It turned things all topsy-turvy.

You know how it is when you stand in front of a photographer's shop where they have those violet incandescents? Your flesh sort of turns bilious green and your lips look like something the cat dragged out of the well? Well, that's what happened now. I looked at Biggs and grinned, and he looked at me and split lavendar lips in a blue-fanged, terrifying smile.

"Well!" he said. "There we are. Seventy-two hours from now, when we reach Iapetus, Diane should have a magnificent bouquet of dewy-fresh Earth roses, the first ever to be worn on that outpost."

"And seventy-two *seconds* from now," I told him, "I'm going to have the screaming meemies from looking at that grass-colored pan of yours. Let's get out of here."

WELL, for the next couple of days nothing much happened. The *Saturn* had been cut over to the V-I unit,* of course, and we were jogging along at a very tidy and comfortable rate of 185,000 m.p.h. toward our destination. Having helped Lancelot Biggs to the best of my abilities, I now cooperated in his further efforts (to the betterment of my sanity) by remaining away from his experimental chamber.

* The V-I (velocity-intensifier) unit is an invention of Lt. Lancelot Biggs which permits spacecraft to attain velocities approaching the "limiting velocity" of light, i.e., approximately 186,000 miles per second.—Ed.

He, too, remained pretty much in seclusion. The only time I saw him was on the second day after noon mess when he came wandering up to my turret mumbling to himself like a cow in a clover path.

"Sparks," he demanded, "what rhymes with void?"

"Boid," I told him promptly. "Which I ain't . . . and 'annoyed' which I am. Can't a hard-working radioman even catch up his slumbers around here without you getting in his hair? Why? When did you develop the poet complex?

He flushed and laughed awkwardly, "Well, it—er—doesn't really matter," he temporized. "I was just trying to —Well, I thought it would be amusing to write a little poem to say to Diane when I gave her the roses. You know, a sort of a—love song."

"Some people," I snorted, "are born for trouble, and some people have trouble thrust upon them . . . but you're the first guy I ever knew who went out of his way looking for it. Now it's love songs to go with the roses. By the way, how are the roses coming along?"

"Why, all right, I suppose," said Biggs. "I haven't been in to see them since yesterday. You see, I have the thermoes turned up to max in that room and it's pretty hot—"

"Not half so hot," I told him, "as the Old Man's going to be when he finds out you're the one who swiped that container from the cargo bin."

Biggs looked started. "Oh! Has he discovered one of them's gone?"

"You're darn tootin' he has! He came busting up here and asked me if I knew anything about it. I suggested maybe it was mice, but that didn't go over so big on account of mice don't generally build lead-covered bungalows. So if he happens to ask you, you'd better—"

"Better," interrupted an irate voice from the doorway, "what?"

THE two of us spun like drunks in a revolving door. It was Cap Hanson himself, big as life and twice as furious. Biggs gulped.

"Oh—er—hello, Skipper. Sparks and I were just talking about—er—"

"About poetry," I finished. "Lanse was looking for a rhyme for—"

"Don't lie to me," blazed the skipper. "I heard what you was talkin' about. *So,* Lancelot! It was *you* tooken that container of seeds out of the cargo!"

Biggs said, "Why, yes, Captain, but—"

The Old Man suddenly remembered he was Lancelot Biggs' father-in-law as well as his chief. His face wrinkled like a prune, and he said in a melancholy voice, "Now, son, you shouldn't ought to have done that. Don't you know you're goin' to get in a peck of trouble? Them seeds was valuable."

"I know," replied Biggs, "but I just took a few seeds out of one of the containers. Nobody will ever notice. And —and it was our anniversary, you know. Diane's and mine."

The Old Man shook his head sadly.

"Lancelot, I'm surprised at you. Just took a few out of one of the containers? Don't you realize that whole box of seeds is ruined now? Why do you think they sealed them things in lead?"

Oh-oh! Suddenly, but belatedly, I knew what he meant. So did Biggs. The two of us stared at Hanson, then at each other haggardly.

Lancelot whispered, "Cosmic rays? Oh, my gracious! I forgot all about—"

"Sure, cosmic rays," groaned the Old Man. "You know they create mutants in dormant germinating cells. Now that them seeds been exposed they ain't worth a tinker's dam to anybody. They

won't breed true. Lord only knows what kind of freaks and fiddle-di-diddles'll come up—if anything comes up at all." And he shook his head. "Lancelot, son, I'm sorry. But you know what I'm goin' to have to do. I'm goin' to have to enter this on the ship's log, and—and I'm afraid them seeds may cost you your job!"

IT WAS just at that moment the *vocoder* on my set began chattering. The interruption suited me fine. I leaped to the controls and hastily tuned in my caller. But whatever pleasure I had felt dissipated instantly when I learned who he was and what he wanted. It was Tommy Jenkins, the bug-pounder at Ganymede IV, space-calling in Compang code.

He asked, "That you, Donovan?"

"It's not my grandmother," I retorted. "Why the Code, Tommy? What's up?"

"Taxes," said Jenkins, "skirt-lengths, and the Big Chief's blood pressure. Sparks, how far are you from Iapetus?"

I checked traj swiftly on my flight record. "About fifteen hours," I answered. "Twelve, maybe. Why?"

"Well, you'd better make it ten. Because we just got word the Cosmic Corporation freighter *Gemini* is closing in on Yappy with exactly the same thing you're carrying—a cargo of flower seeds! Orders are to beat them there at all costs. That is all. *Salujo!*" And he signed off.

I turned to the Old Man. "You heard that, Skipper?"

His face was the color of a 'dobe hut.

"I heard it," he croaked feebly, and stared at Biggs with lacklustre eyes. "Trouble, trouble; nothin' but trouble! Lanse, is there anything we can do to speed up a little?"

Biggs shook his head. "No," he groaned. "We're spinning the V-I unit almost at maximum acceleration now—185,000 plus. If we boost it any higher we're taking chances. We may exceed the limiting velocity of light and lose ourselves in the negative universe like we did once before." A sudden anger disturbed his usual calm complacency. "If we lose this race," he stormed, "the Company has nobody to blame but itself! *They* merchandised the V-I unit and made it available to every ship in space. Still—we must beat the C.C. to Iapetus, even if we have to take chances."

He turned to me suddenly. "Sparks, call Jenkins again. See if you can get an exact locus on the *Gemini*."

I did so. A few minutes later Biggs was seated at my plot table, anxiously scanning the course trajectories of both their ship and ours, reeling off involved and typically Biggsian mathematics that would have warped the gears of a calculating machine. The creases on his brow etched deeper as his columns of figures grew longer. Finally he stopped scribbling, lifted his head.

"Well?" asked the Old Man with bated breath. "What's the answer, son?"

"It's close," Biggs told us. "Perilously close. As near as I can figure, it's a nip and tuck race. They started later than we did, but their point of departure was nearer our mutual goal. From the viewpoint of distance alone, they should drop gravs on Iapetus one hour before we do."

HANSON groaned. "Licked again!"

"No," said Biggs. "Not quite. There's one thing which may save us. Iapetus' diurnal revolution. It's not simply a matter of *reaching* the satellite. They must actually beat us to the mining city. If their calculators have figured *our* position as we have

figured *theirs*, they may be overconfident and think they've licked us just because they have an hour's advantage. And—this is risky, Cap, but—"

"Go on!" said the Old Man with rising excitement. Risks don't scare him. Danger is his bread and butter. "Go on!"

"If we can hold the velocity-intensifier in operation until just before we effect landing, we'll drop to normal acceleration right smack over that sector of Iapetus where the mines are, thus cancelling the sixty-odd minutes of stratosphere cruise the *Gemini* will have to make—and dropping us into the cradles at practically the same moment."

"If that happens," I broke in, "who gets the contract, Cap? Is there any provision for deadlock in the Space Regulations?"

The Skipper fumbled with the loose-leaf pages of his memory.

"Yeah," he finally decided, "there is. The Interplanetary Commerce Code rules that whenever two companies effect a simultaneous landing, their product shall be offered the governing board of the newly opened territory in direct competition."

I snorted loudly. "A hell of a lot of good that does us! It'll be a matter of choosing seeds against seeds. And if I know those Cosmic Corporation crooks, they'll bribe the Iapetus governing board blue in the face."

"Wait!" cried Biggs. "It may not be seeds against seeds. It may be seeds against—flowers!"

"Huh!" gasped the Old Man. "What was that, boy?"

"My . . . er . . . horticultural experiment," said Lancelot. "By the time we arrive there—perhaps by *now*—we may actually have flowers to show them. Exhibit A of the sort of thing our seeds will produce. It should provide a clinching argument."

Hanson stared at him bewilderedly. "You mean them seeds you swiped are growing flowers in three days?"

"That's what I hope," nodded Biggs. "Let's find out. Come down to my growth chamber and we'll see."

We needed no second invitation. In minus zero seconds the three of us were galloping down the ramp to the room wherein Lancelot Biggs had installed his hydroponic tank. We waited breathlessly as he fumbled with the lock . . . then gasped and choked as the door opened and a steamy mist gushed out to smack us in the pans with an almost ponderable force. Then regardless of the heat the three of us were crowding into the narrow cubicle and—

"Great snakes!" I gasped.

"Good goddlemitey!" croaked Cap Hanson.

"Oh, my gracious!" bleated Biggs.

For we had stepped not into the metal chamber of a spacecraft bunkroom—but into what seemed the foetid fen of some steamy swampland jungle!

IT'S hard to describe what that room looked like. Imagine a Gauguin painting come to life . . . a tropical hothouse gone berserk. That gives you some idea.

The original tank wherein Biggs had sprinkled the rose seeds was completely invisible, submerged beneath a crawling octopus of greenery. Writhing fronds spewed from the container to twist in tumultuous entanglement beneath our feet . . . up the walls . . . across the ceiling. Twining and spiraling around every piece of furniture, every bracket, any support to which suckered tendrils could cling. A heady perfume thickened the air; perfume from monstrous growths that no more resembled a rose than *I* look like a

wasteland Martian.

Cap Hanson had been right. The action of cosmic rays had done weird things to those original germ cells.* *Rosa rugosa* had—figuratively and literally—gone crazy with the heat waves. Here triple-headed roses with spiny petals reared themselves awkwardly out of thick spongy, palmate foliage . . . there a pinkish, cactus-like rose-thing clung tenaciously to a table leg . . . elsewhere gossamer-fine, lavender petals, propelled by stirring gusts of air, drifted lazily across the room toward us, dangling epiphytic roots.

It was a startling exhibition of Mama Nature gone nuts! Only in two respects did these fantastic creations resemble the roses from which they were mutant. Each variation had thorns—as we discovered painfully when we tried to walk amongst them—and all had some shade or tint or hue of the fundamental red rose whence they had sprung.

Cap Hanson groaned, "Oh, my golly, what a mess! Of all the—Hey, let me out of here! Whatever's goin' on, it's gettin' *us*, too! Your faces!"

Biggs cracked indigo lips in what was supposed to be a placating grin but looked more like a hungry pitcher-plant licking its chops. He said, "The color means nothing, Captain. It's just a matter of light refraction."

"Which doesn't alter the fact," I reminded him, "that the experiment's a flop, Lanse, old boy. I—I guess we might as well call it quits. Clean this mess up and throw it away. We can't show this stuff to the Iapetus board. They'd toss us out on our necks."

Biggs nodded dolefully. "I guess you're right, Sparks. This is a bitter disappointment. I did *so* want to surprise her."

"Her?" grunted Hanson. "The Board's made up of hims."

"I mean," wailed Biggs plaintively, "Diane. Now she won't get her anniversary corsage . . ."

SO that was that. The Skipper went back to the bridge to give our second in command, Lieutenant Dick Todd, the necessary trajectory instructions, and I stuck around, sweating and swearing, to help Biggs clean up the aboriginal morass he had created with his experiment. It was tough going, too. Like I said before, those roses had thorns. By the time we got done, our fingers looked like First Prize in a needlework exhibit.

It was just as we were finishing and Biggs was draining the final rugose drops of fluid from his tank that he loosed a little yelp of excitement.

"Sparks!"

"Now what?" I asked. "If it's another experiment—"

"Look! This one bred true in spite of the cosmic rays." And with quivering fingers he held up for my inspection one tiny bud which had been nestling coyly in a corner of the tank. A small but perfectly formed, brilliantly scarlet rosebud!

Well, I guess it was the irony of it that got me. I stared at the poor, pathetic, bedraggled little thing for a minute, then I chuckled.

"Well, there's the love song you were looking for, Biggs."

"Eh? What's that?"

"When you give her that bud," I told him, "you can say to her, *'Roses are red, violets are blue; the rest went whacky, but this one grew'.*"

* Science has already discovered that the bombardment of cosmic rays is at least partially responsible for the creation of "freaks," "sports," or "mutants," in both the animal and vegetable world. Life on atmosphere blanketed planets is not subject to this bombardment, because of the protective Heaviside energy layer . . . but spacecraft must be carefully shielded from such radiation.—ED.

Biggs said defensively, "Well, anyhow, this proves my theory about growth stimulation was right. It may not work in open space, but it will work on a planet where there are atmosphere blankets against cosmic ray penetration. And Diane *will* get one rose."

And with painstaking care he transferred the bud to a glass of water. Poor little pitiful symbol of a noble experiment which flopped.

AND that was all until ten hours later. It's a shame to gloss over the excitement of those next ten hours, but it was mostly technical stuff you Earth-lubbers wouldn't understand.

The main point is that, though as a botanist Lancelot Biggs may be a bum Burbank, as an astrogator he is in a class by himself. His computations proved correct to four decimal places. We held the *Saturn* on the V-I unit until we were so close to Iapetus that the permalloy walls of our space-freighter started humming with tropospheric pressure, then released to normal acceleration, and—*bingo!* There we were, smack-dab over the new and as yet unnamed mining town. Just as Biggs had predicted.

Our appearance out of seemingly thin air—you understand what I mean if you know how the velocity intensifier works—not only created a sensation on Iapetus; it darned near created an accident in our little segment of atmosphere. For when we switched over we found ourselves not more than a quarter mile from the Cosmic Corporation's *Gemini,* which had been easing into Iapetus complacently unaware that *we* were within several thousand miles.

Instantly there was hectic excitement upon both ships. Landing rocket jets flared, grav clamps growled. and the two of us hurtled groundward like brickbats.

It was a photo finish. We nosed into one cradle just as they stern-jetted into a second. And just as Cap Hanson leaped from *our* airlock, the *Gemini's* skipper burst from theirs.

Hanson bawled, "IPS-freighter-*Saturn*-landing-with-a-cargo-of-flower-seeds—"

His competitor screamed, "CC-freighter-*Gemini*-claiming-priority-on—"

But neither of them got to first base. A representative of the Iapetus colonists came to each ship, and the messages they delivered were identical.

"The governing board has decided that landings were effected simultaneously. Consequently you will present all wares for decision in open competition. Please report immediately to the general offices."

SO THERE we were, a few minutes later, standing in the council room of the Iapetus governing board; Cap Hanson, Lancelot Biggs, Diane, and myself, glaring angrily across the room at representatives from our competitor space-craft, the *Gemini. Gemini* means "twins," which in this case was right, because the glares Cap Hanson and Cap Murgatroyd were hurling at each other were Siamese.

The Iapetus governor on Earthman named Larrabee—said quietly, "Gentlemen, welcome to our new colony. Now . . . I believe you each carry cargoes on which you wish to claim commercial priorities for your respective companies? Will you be kind enough to declare the nature of these cargoes?"

"Mine," said Cap Hanson loudly, "is flower seeds." And scowled at Murgatroyd.

"Mine," said Murgatroyd loudly, "is flower seeds." And scowled at Cap Hanson.

The Iapetus governor stroked his

jaw thoughtfully.

"This is a delicate situation, gentlemen. You both carry a cargo our colonists will receive eagerly. It may be rather difficult to decide which of you —but I must let you present your own cases. What types of flowers are you carrying?"

"Roses," declared Cap Hanson defiantly. "Eighteen varieties of roses, includin' the rare, perennial Venusian swamp-rose."

"I see. And you, Captain Murgatroyd?"

"Thirty-four separate and distinct varieties of flowering plants," declared our opponent triumphantly, "including roses, geraniums, nasturtiums, pinks . . . practically everything, sir!"

"Ah, yes. That seems to be a point in your favor, Captain Murgatroyd. Now—the size of your cargoes—?"

"Five hundred lead-sealed ten-bushel containers," gloated Captain Murgatroyd.

"Very good. And you, Captain Hanson?"

"The IPS," snarled the Old Man, "don't go in for samples! When we carry a cargo, we carry a cargo. Twelve hundred lead-sealed ten-bushel containers, Your Honor!"

"Excellent! Excellent, Captain! That seems to be a point in *your* favor. This is most difficult. Er . . . Captain Murgatroyd . . . perhaps you could give us some idea as to the growth potentialities of your flowers?"

Murgatroyd grinned and dug into an inner pocket, brought forth a folder which he placed in the Governor's hands.

"Yes, sir. Here is a four-color brochure issued by our Company, describing each and every type of plant we have brought to Iapetus, and reproducing pictures of those flowers in full natural color."

THE Governor shook out the papers, and my heart played tag with my shoestrings. The CC's publicity department had done a magnificent job. Those natural color photographs were luscious enough to make the mouth of the rankest amateur gardener water. Gay yellows and soft blues . . . brilliant splotches of crimson . . . dainty, sunny marigolds . . . shy nodding violets . . . that pamphlet was a tempting hunk of stuff.

But I had been wrong in thinking the Governor of Iapetus could be bribed. He was an honest man. He turned to Cap Hanson.

"And you, Captain? Have you a similar brochure?"

The Old Man scrubbed his jaw feebly. "Why . . . er . . . the truth is, Your Honor—" he began.

It was then Lancelot Biggs stepped forward, interrupting the skipper.

"The truth is, Governor," he said blandly, "*our* Company does not depend on printed booklets to sell its products. There is, you surely realize, a certain amount of artistic falsification —or should I simply call it 'artistic license'?—employed in reproducing facsimiles of living objects. Therefore, in order to sell *our* goods we always attempt to offer a living example of our product.

"I have here—" He dug into his jacket pocket and brought forth a bulging waxine envelope—"the bud of one of our most gorgeous blooms, the famous *Rosa rugosa*. You can see for yourself—"

With the look of a proud papa he opened the flap of the envelope, started to withdraw his single rosebud, and stopped suddenly. A look of startled alarm drained his face of all color. He whispered, "But—but this—"

"Go on, lad," prodded the Old Man. "Show 'em. You got a bud there, ain't

you? Well, show 'em."

But Biggs didn't show 'em. Instead, he closed the envelope again, slipped it back into his coat pocket, and his liquescent larynx bobbled frantically as he said,

"I—I'm sorry, gentlemen. I haven't anything to show you."

"Why?" I demanded. "Lanse, for gosh sakes, *why?* What's happened to—"

He turned to me haggardly. "The bud—" he choked—"*died!*"

WELL, I'll hand it to that Governor. He was not only honest; he was so fair and square you could have used him for a measuring rod. He said consolingly, "That's too bad, Mr. Biggs. But accidents will happen. Is there anything further you have to say on behalf of your product?"

"I got plenty to say!" stormed the Skipper. "Just on account of one bud died don't mean we ain't got—"

"Excuse me, Skipper," interrupted Lancelot Biggs mildly. "I—I think the time for deceit has passed."

"*What!* What's that?"

"I think the governor should be told the truth," said Biggs. "We should confess that our seeds are not a first class product. Might not, indeed, even flourish in the soil of Iapetus."

"Lanse!" I cried. "Do you know what you're saying? Don't talk like that!"

"Yes, Governor," nodded Lancelot Biggs sorrowfully, "I'm afraid that's true. Your colony wouldn't want our seeds. For one thing, they're all roses. The Cosmic Corporation offers you all kinds of flowers. For another thing, our seeds are not particularly hardy. Furthermore, I'm afraid a number of them were spoiled in transit when the leaden containers were broken, allowing cosmic rays to seep in—"

"*Biggs!*" howled Cap Hanson. "Shut up this minute an' get out of here! What do you mean by tellin' lies like that? A number of our containers? It was only *one* container, and—"

The Governor interrupted him with a smooth lift of the hand.

"Never mind, Captain Hanson. We understand. Er . . . thank you, Mr. Biggs, for your frank statement. Gentlemen of the Council, you have reached a decision? Yes, I thought so.

"Captain Murgatroyd, it gives me great pleasure to award you, on behalf of the Iapetus Governing Board, full priority rights to the flower-seed concession on our new colony, as set forth in Rule 14, Paragraph—"

"*Ruined!*" wailed Cap Hanson. "Sabotaged by a wolf in cheap clothing! Diane, why did you ever marry that falsifying, good for nothin'—"

He broke down. We led him, babbling incoherently, back to the ship.

BUT there, Diane, who had held up nobly throughout the proceedings, turned to her husband curiously.

"Lanse, dear, you know I've always backed you up in everything you've done, but—but why did you do this? Don't you know the loss of this monopoly will cost the Company millions, and may cost Daddy his job?"

Lanse nodded. "Yes, I know that would be true, dear . . . if there were not other factors involved."

Cap Hanson lifted his head drearily. "Other factors?"

"Yes, Skipper. Something amazing has happened. Something so incredible that even yet I can scarcely credit it. It all turns about something Sparks said—"

"Who, me?" I gulped. "Now, don't drag *me* into this."

"You remember that . . . er . . . love song you suggested to me?" que-

ried Biggs.

I nodded glumly. "Sure. *'Roses are red, violets are blue, the rest went whacky—'*"

"But this one—" finished Lancelot Biggs triumphantly—"is *blue!*"

And dramatically he drew from its waxine envelope the rosebud he had refused to show the Iapetus Governor, tossed it on the table before us. We all stared at it in gasping bewilderment. For he was right. That tiny rosebud was a brilliant, penetrating, heavenly, *cobalt blue!*

Cap Hanson choked, "But—but a blue rose! I never seen such a thing before!"

"Neither," crowed Biggs, "has anyone else. But flower-lovers have dreamed of them for centuries.* Hundreds of thousands of dollars—perhaps millions—have been spent by botanists in an effort to create that rare, often wished for but never accomplished example of beauty, the blue rose. A fortune awaits the first man to put such a thing on the market. And by luck we have done it!"

"You—you mean people will *buy* this thing?"

"From now," declared Biggs, "until the end of time! This single mutant will parent a whole new breed of blue roses, and botanists throughout the entire solar system will mortgage their hothouses to buy slips from this parent plant.

"Now you see why I couldn't show it to the governor. I couldn't risk letting the secret get out until we had taken the bud back to Earth, patented it in the name of the IPS.

"Incidentally—" He coughed delicately—"our Company should be very pleased. I think we may anticipate a considerable bonus for our part in creating this new species."

I SAID, "But, hey—wait a minute! There's something wrong somewhere. I seen that bud before. But when I did, it wasn't blue! It was as red as an old maid's face at a strip-tease!"

"*Looked* red, you mean," corrected Biggs. "Not *was* red. That was a matter of color reflection, Sparks, caused by the Hertzian ray lamp I had installed in the laboratory. You will remember our faces were green, our lips purplish. You see, color is a tricky thing. For instance, when you see a green leaf, what color is that leaf?"

"Why, you just said. Green, of course."

"Ah, no!" said Biggs. "It is *every color but green!* Colors by which we designate objects are *not* their true colors. Quite the reverse. They are the colors those objects reflect.* Under the Hertzian wave this precious bud—" He caressed it fondly—"apparently reflected all colors save red. We therefore thought it a normal red rose. But now that we see it under ordinary light, we realize it absorbs the red range as well as all others save the blue."

He shrugged. "So—there you are! And now, darling, if you will allow me, I would like to give you a little anni-

* "Although the attempt has often been made to produce a blue rose, no one has ever succeeded . . . The reason a blue rose has never been produced is that blue has never arisen spontaneously in the Genus *Rosa*, and no blue flower of another genus has ever been found that will . . . transfer its blue color to the latter. A breeder who could do this would . . . make a fortune." Gager: *The Plant World.*—Ed.

* "Sunlight, as Sir Isaac Newton discovered, is a combination of the seven colors that compose the spectrum. An object is red because it is so constituted that it reflects the red rays of a beam of sunlight but absorbs all others . . . a lily is white becaues it reflects all the rays . . . a buttercup is yellow because it reflects only the yellow rays, absorbing all others . . . an object is black because it absorbs all the colors of the spectrum." Gager: *The Plant World.*—Ed.

versary present. The first blue rose ever to be grown—"

But Cap Hanson snatched the bud from his hand feverishly.

"Oh, no, you don't! That there thing goes right back into your fish pond and keeps growin' until we get back to Earth. Which is goin' to be as quick as we can make it, or maybe more so. If you two gotta have an anniversary treat, I'll see to it that Slops whips up a special banquet tonight, complete with champagny-water an' everything. How's that?"

And from the look in Diane's and Lancelot's eyes as they moved toward each other, I guessed it would probably be all right. For when a man and a woman feel that way about each other, they don't really need special dates to celebrate.

Anyhow, Lancelot Biggs had warbled his song of love. "Love sends a little gift of roses." Yeah—*blue* roses! But what did you expect? That whacky wingding of the spaceways never does anything in a normal way.

Or—does he?

TO OUR READERS

For the convenience of those readers who have written us requesting back copies, we are instituting this new feature, a monthly list of back issues still in stock. The following back issues of AMAZING STORIES and FANTASTIC ADVENTURES are available:

AMAZING STORIES

1938—May, June, August, November and December
1939—January, February, March, May, June, July, August, September, October, November and December
1940—January through July, November and December
1941—January, February, March and May through December
1942—January up to current issue

Prices: All issues up to and including December 1941 with the exception of May 1941—25c; May 1941—30c
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FANTASTIC ADVENTURES

1939—May, September and November
1940—January through June, August and October
1941—January, March, May, June, July, August, September, November and December
1942—January up to current issue

Prices: All issues listed up to and including January 1942, 25c
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THE OBSERVATORY

(Concluded from page 8)

YOUR magazine now has another able man at its helm, assisting in its navigation. He's going to have a lot to do with getting future issues to you, and we therefore introduce him to you (so you can blame him for any mistakes you see in the future!): He's Mr. Howard Browne, and he first came to your attention in our big companion magazine, *Mammoth Detective* (in its first issue with a story about a skip tracer that was so good it hit the readers between the eyes, and thus in its second issue with a second story about the same character). Incidentally, he keeps on telling us while in the middle of writing the Observatory, that his name ends with an e. So keep it in mind next time you have a complaint to make about the stories being too short or too long or sumpin.

EVER seen a Chinaman cry? Now there's a scientific question that needs an answer. And we've finally got it! The fact is, they do. And whoever said they don't, didn't dig down like we did to find out. Chinamen do express grief, but only in accordance with a complete list of regulations which tells exactly how it must be done.

THE expression of anger is frowned upon by wellbred Chinese and some men have even "broken" their heart and died rather than show their anger. When a Chinaman sticks out his tongue at you, he is not being insulting, but is only registering surprise at what you may have done or said. On the other hand, if he stares at you with wide eyes, he is not amazed at your action, but very angry with you. In fact, the only time a Chinaman expresses himself as an American would is when he shows fear, for when confronting fear, all races act as one.

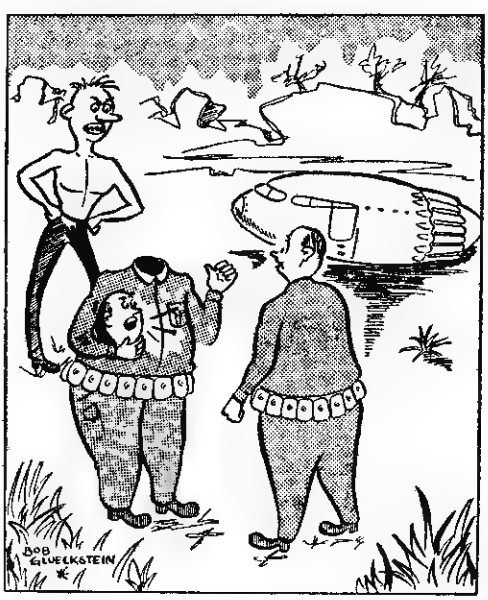
AS you read this, that big companion magazine we mentioned before, *Mammoth Detective*, is at your newsstand right now with one of the most amazing collection of fine detective stories ever put together between two covers. It's a 320 page giant. Maybe a few hints as to what's in it will put you wise to what you'll miss if you don't dash out and get a copy!

FIRST, there's a new novel by Wyndham Martyn, 79,000 words long, which is certainly a good two-bits worth without anything else. Then there're eleven, yes *eleven*, other stories, ranging from short novels to short shorts. And a couple of 'em are true stories a little bit different from the usual stuff you've been reading. For instance, David Wright O'Brien (now you know the mag's good!) does one on the Chicago Homicide Squad, straight from the "inside." You'll find stories by authors like Harold Channing Wire, Robert Leslie Bellem, George Armin Shaftel, William P. McGivern, John York Cabot, Dwight V. Swain, G. T. Fleming-Roberts, Henry Gade, Alexander Blade, and Howard Browne. You'll also find thirteen swell features. It's a book you'd be, to speak plainly, a sap to miss. Don't say you didn't get it!

THE newest report from the invention front is a device which should save the lives of thousands of miners who would otherwise be killed in cave ins. After studying a great number of cave-ins, the inventor came to the conclusion that they all follow the same pattern. First there is a definite break in the rock strata of the roof. The roof is then supported only by shale and dirt. The device used to detect this first break is quite simple, but very effective. One steel tube is put inside another steel tube and they are kept apart by steel springs. One tube touches the roof and one touches the floor. The indicator is so sensitive that a break causing a fall of only 1/100 of an inch is recorded. By reading the indicator, the first break can be discovered and the eventual complete cave-in can be forecast.

NEXT on our program is an innovation that you readers have been asking for in increasing numbers recently. We're going to give you a complete novel in one issue, in place of our current serial. This is because we want to give the boys in the army a break too, and we have a hunch we'll eliminate serials for the duration. The first novel will come along very soon.

And with that, so long for 30 days! *Rap.*



"I just asked him where we were and he bit my head off!"

Capt. Stinky's Luck

by GERALD VANCE

Captain Ebenezer Scragg fell for a dame and bought a jewel—but it was a fake. Then suddenly the crooks wanted it back!

"Please, Captain," she cooed. "Buy it for me. It's so beautiful, and a bargain!"

CAPTAIN Ebenezer Scragg, master of the garbage scow, *Sweet Pea*, was enjoying one of his rare moments of complete peace and contentment, as his squat, ugly ship drifted into the space harbor at the Earth-Jupiter stopover planetoid.

He was standing on the *glassicade* bridge of the ship, the eight square feet of which he was complete king, and the one spot in the universe closest to his heart.

The captain's features were wreathed in a happy smile and his slight frame was contentedly relaxed. Even his bristling red hair seemed subdued and at peace.

He picked up the communication hose as the ship nosed into the harbor.

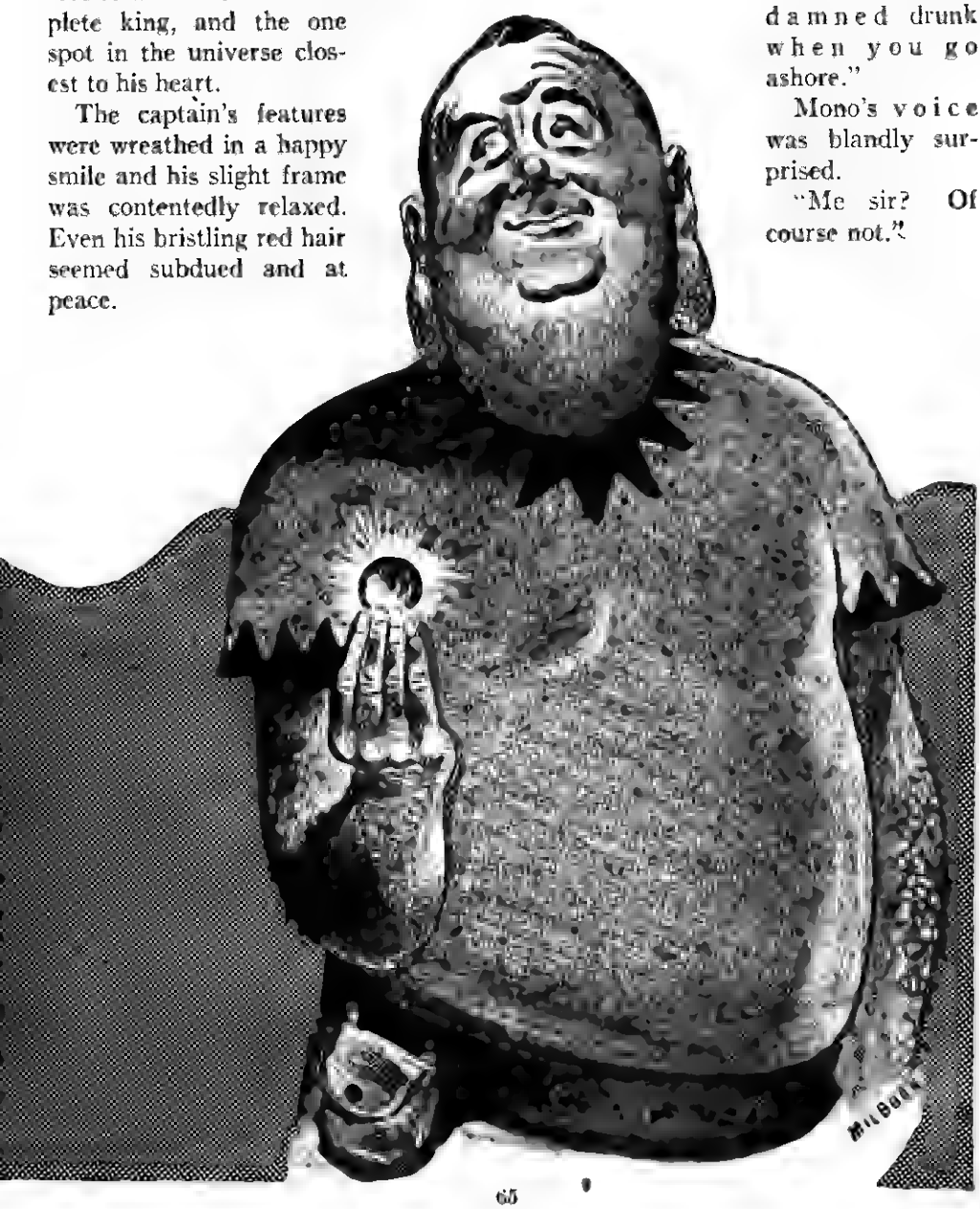
"Mono," he called into the hose.

An instant later the suave voice of Mono, his Venusian navigator and deckhand answered, "Yes?"

"We're right on the line," Captain Scragg said. "You can cut off them dang rear rockets now. And Mono, don't get too damned drunk when you go ashore."

Mono's voice was blandly surprised.

"Me sir? Of course not."



The captain hung up the hose, and even the knowledge that Mono would be staggering drunk within an hour after leaving the ship, was not enough to disturb his peaceful tranquility.

For Captain Scragg was in the caressing coils of man's oldest emotion. In short, the cocky, diminutive captain had fallen in love. The object of his affections was the Widow Jones of Earth, proprietor of a space-port bar, and late wife of a carousing space skipper, whose shady career had been cut short by the careful aim of a Federation officer.

The captain sighed, thinking of his fair one. When he felt the slight jar of the ship's prow against the cushioned air dock of the space harbor, he left the bridge and descended the companionway to his cabin. He had some reports to make up before he could leave.

The *Sweet Pea* was returning with a load of garbage from the *Gloria*, a magnificent space liner on the regular Earth-Jupiter run. The *Gloria* was a few hundred miles out, and it would not put in to the Planetoid until it had passed quarantine, a matter of a few hours. Captain Scragg had to have his refuse report ready by that time for the captain of the *Gloria*. And Captain Scragg would not allow even the sweet call of love to woo him from his duty.

When he finished the reports an hour later, he felt very virtuous. He put the papers in his pockets and stuck his battered cap at a rakish angle on his head and left the ship. . . .

CAPTAIN Scragg followed one of the devious and dark lanes that twisted through the harbor area until he came to a small spaceport saloon that bore the simple legend:

"THE WIDOW JONES—CASH ONLY"

With pounding heart Captain Scragg shoved open the swinging doors and entered the dingy, smoke-filled saloon.

The Widow Jones was standing behind the bar, idly wiping a damp cloth over its scarred surface.

The captain seated himself at the bar.

"You look purtier than ever," he said, in a brave attempt to be gallant and charming. He wished his heart would stop leaping about in his body.

The Widow Jones moved down to the captain. If she noticed the ardent light in his eyes, she disregarded it completely.

"What'll you have?" she asked, matter-of-factly.

"Aw, Maisie," Captain Scragg said plaintively, "ain't you ever goin' to think of me as something besides a customer? I tell you, Maisie, you do things to me. I can't sleep anymore thinkin' about you."

"Talk's cheap," the Widow Jones said scornfully. "If you're thinking about me all the time, why don't you bring me a little something when you come in; instead of mooning over the bar like a sick calf."

The captain brightened. Maisie's unsubtle approach cheered him. Maybe it meant she cared!

"All right, Maisie," he said, slapping a fist on the bar for emphasis, "I'll get you what ever you want, danged if I won't. Just you name what your little heart's craving for and I'll get it for you."

The Widow Jones fluttered her eyelids coyly.

"Why, Ebenezer," she said, "you just sweep me right off my feet."

The figurative connotations in the Widow's words brought a happy blush to the captain's weather-beaten features.

"Aw shucks," he said, grinning fool-

ishly, "I don't want to rush you, Maisie, but I guess I am what you'd call the tempestuous type. But don't you be bashful; just tell me what you want and I'll get it for you."

THE Widow Jones placed her red arms on the bar and leaned forward, a happy glint of anticipation in her eyes.

"Well," she said, "if you really want to get something for me –" She paused and looked up and down the bar and then turned back to the captain, lowering her voice to a conspiratorial whisper, "you know Puna Walla, don't you "

"That double crossing Martian snake!" Captain Ebenezer said shrilly. "You bet I do. I wouldn't trust him as far as I could throw the *Sweet Pea*. The last time I was in his rat hole of a bar, he fed me a knock-out powder and took all my money and had his dang durned bouncer toss me into the alley. Know him? I'll say I do. The next time I see him I'm going to break him into a dozen pieces."

The Widow Jones shook her head.

"Puna Walla has killed bigger men than you with his bare fists. You won't get nowhere with him that way. Now I've got a scheme where you can get even with him for the dirt he done you."

"What's that got to do with me getting you a present?" the captain said testily.

"Listen good and you'll see," the Widow Jones said with a sly smile. "Puna Walla has got hold of a jewel, but he don't know how valuable it is. You can buy it from him for next to nothing. It's a beautiful thing, one of them clear white stones they get from Saturn, but Puna Walla don't know that. He thinks it's just a hunk of glass. I know he'd sell it for a hundred dollars or so. You got that much, ain't you?"

"Umm," Captain Scragg said, rubbing his whiskered jaw with a horny hand. All of his cautious, shrewd instincts were aroused, but they were not proof against the beamingly fond look the Widow bestowed on him as she asked the question.

"Why, sure I got a hundred dollars," he said, "but that seems like a lot of money to pay—"

The Widow Jones pouted openly.

"I thought you was willing to get me anything I wanted," she sniffed into the bar rag.

"Now wait a minute," the captain said anxiously, "if you want that jool you're going to get it. It'll take all the ready cash I got, but money don't mean a thing to me if it's goin' to make you happy."

The Widow Jones brightened visibly.

"And don't forget," she said warmly, "you're going to get even with Puna Walla at the same time."

"Yeah," the captain said, "there's that too."

HE tried to inject a hearty note of enthusiasm into his voice, but somehow the effort failed. For some reason Captain Scragg was feeling less enthusiastic about the jewel venture with each passing second. Puna Walla was not the type of man to let a valuable jewel out of his possession for a hundred dollars, but the captain realized that it was too late to back out of the deal now. He had already committed himself.

His enthusiasm was not increased when, a moment later, the swinging doors banged inward, and an immense, swarthy Martian lumbered into the bar.

"What a stroke of luck," the Widow Jones whispered tensely to the captain. "Here's Puna Wala now."

"Yeah," Captain Scragg said dryly,

"what a coincidence."

Puna Walla was big, even for a Martian. His great chest was barrel-like in size, and his head looked like a half bushel. Pendulous ears hung almost to his shoulders, but his eyes were keen points in his brutal, moon-like face.

He strode to the bar, grinning broadly. He slapped the captain on the back, almost knocking him off the bar stool.

"Ha! My friend Captain Stinky," he boomed. "It is good to see Captain Stinky again."

The captain felt his blood pressure soaring dangerously. An angry red mottled his face. If there was one thing in the world that could drive him into a frenzy, it was the sobriquet, Captain Stinky.

He jumped to his feet, knocking his stool over. He shoved his jaw out belligerently and glared at the grinning Martian, who towered three feet above him.

"If you're after trouble," he cried in shrill rage, "you've come to the right place. I got a name, you lop-eared, over-grown tub of Martian lard, and if you don't start using it, I'll—I'll paste you into the middle of next week."

The big Martian continued to grin easily.

"I am so sorry, Captain Scragg. It was only the mistake of the tongue. From now on it will not happen again."

The Widow Jones interrupted anxiously.

"We was just talking about you Puna Walla," she said. "Wasn't we, captain?"

"I suppose we were," Captain Scragg growled.

"How is that?" Puna Walla inquired.

"It's about that pretty piece of glass, you've got," the Widow Jones said breathlessly. "The captain was saying as how he'd like to see it."

The big Martian shrugged.

"And why not?" he said. "For my good friend, the captain, I will only be too happy."

HE pulled a handkerchief from his pocket and opened it carefully, displaying a clear, glinting stone, almost an inch in diameter.

"This is my little beauty," he said.

The Widow Jones sighed like a leaky air rocket, and gazed wistfully from the stone to the captain.

"Ain't it purty?" she said soulfully.

Captain Scragg ran a nervous hand through his spiky red hair. He felt uncomfortably trapped, but he could not resist the lambent force of the widow's large melting eyes.

"What'll you take for it?" he asked bluntly.

Puna Walla gazed speculatively at the stone.

"How much?" he said in surprised tones. "It has not occurred to me how much. Maybe a hundred of the dollars is a fair price, no?"

"I'll give you fifty," Ebenezer snapped.

"I do not haggle over the price," the Martian said with a faint sneer. He started to return the stone to his pocket.

"Wait a minute," Captain Ebenezer said, "I'll give you a hundred for it."

"Ah!" Puna Walla smiled. "That is nice. May I see the hundred of the dollars."

"You dang right you can," the captain snapped. He dug into his trousers and pulled out a moth eaten leather wallet, held together by a tightly wrapped piece of cord.

He slipped off the cord and opened the wallet. He laid the money on the bar. An aching twinge shot through him as he watched the Martian's big hand close slowly and greedily over the

crumpled bills.

"All right," he said, "let's have the jool."

Puna Walla chuckled contentedly as he tossed the stone on the bar in front of the Captain.

"I am only too happy," he said. His chuckle swelled to a deep rumbling laugh and he slapped the bar resoundingly with his huge hand. "The pretty stone you have paid one hundred of the dollars belong to you all the time, Captain Stinky."

Captain Scragg felt something like a cold hand close over his stomach. He was too stunned by the Martian's statement to take offense at the hated title of Captain Stinky.

"What did you say?" he gasped. He looked anxiously to the Widow Jones and then he saw that she was laughing too, tears of mirth streaming from her eyes. She leaned weakly against the bar, almost choking with merriment and her hoarse guffaws pounded at the captain's ears with sickening clamor.

Puna Walla tossed half of the captain's hard-earned money to the Widow Jones, and she scooped it up between chuckles.

"That," Puna Walla said, "is your share for baiting the trap for our friend, Captain Stinky."

CAPTAIN Scragg stared at the Widow Jones, his mind staggered by the horrible import of Puna Walla's action. What a simple, stupid fool he'd been! Somehow this pair had joined forces to trick him out of his money—and they had certainly succeeded.

"You swindlers! he shrieked. "Gimme back my money."

Puna Walla threw back his huge head and roared with amusement.

"Listen to me, Captain Stinky," he said, when he was able to control his mirth. "This stone which you buy—do you know where from it come?"

"No!" exploded Captain Ebenezer. "And I don't give a dang. I want my money back."

"The stone I get from your messboy, Mono," Puna Walla cried gleefully. "He come to my bar a while ago with stone. He find this beautiful, valuable jewel in the garbage of your *Sweet Pea*. He gives it to me, Puna Walla, for one bottle of cheap Earth rum. And I sell it back to you, Captain Stinky, for one hundred of the dollars."

"You lousy thief!" Captain Scragg howled. "By rights the stone was mine all the time. If it was in my garbage it belonged to me. You swindled it away from Mono, fixed it with the Widow Jones to get me to buy it back for a hundred dollars from you. Then you split with her."

Puna Walla clapped the captain on the back with his big hand and winked broadly at the Widow Jones.

"That is what I have been try to tell you," he said. "At last you understand. You are one big fool, Captain Stinky."

Captain Ebenezer danced from one foot to another in a frenzy of rage. Never in his life had he felt so humiliated, so betrayed, so bitterly gypped and so callously ridiculed.

"Thieves! robbers!" he screamed.

His face flushed lobster-red; his spike-like orange hair bristled; his snapping blue eyes almost disappeared under his beetling brows. He picked up the stone from the bar and hurled it to the floor.

"There's your dang durned jool back," he shrieked. "I want my money!"

"But that is impossible," Puna Walla said, spreading his hands out and grinning. "The deal is made."

Captain Ebenezer doubled up his fists and lunged at the huge Martian.

"I'll show you," he shouted. "I'll

teach you not to pull your tricks on the Master of the *Sweet Pea*.

PUNA WALLA laughed and put his huge hand against the captain's chest and shoved. It was an effortless, almost careless gesture, but Captain Ebenezer's skinny figure catapulted across the room as if it had been fired from a rocket.

The captain collided with the wall and fell to the floor, stunned and breathless. When he could focus his eyes on the spinning room, he saw that Puna Walla and the Widow Jones were holding their sides, convulsed with mirth.

Painfully he crawled to his knees. His right fist touched a hard round surface and he looked down and saw the clear glass stone on the floor. He put it into his pocket and stood up, aching in every muscle.

The Martian and the widow went into fresh gales of laughter as he limped toward the door, crushed and bitter.

"Come in again, Captain Stinky," the Widow Jones called out mockingly.

Captain Ebenezer halted and glared angrily and helplessly at her, then he turned and limped out of the bar.

Outside, the captain paused only long enough to shake his fist in futile rage at the Widow Jones' establishment, before stamping off down the dark crooked street, swearing blasphemously at the top of his shrill cracked voice.

It wasn't so much the loss of the money, although that was bad enough. The perfidy and double-cross of the Widow Jones was the thing that really rankled. That and the fact that it was the detested Puna Walla who had conceived the swindle.

The captain turned a corner and a small running figure collided with him, almost knocking him to the ground.

"Why don't you watch where you're going?" snapped the captain shrilly.

"So, so sorry," the figure gasped. "In much hurry."

The muffled voice was familiar. Captain Ebenezer dragged the man closer to the flickering street light.

"Mono!" he snapped.

THE small Venusian looked up at him in anxious entreaty. His slightly green skin was pale and his perpetually blank expression had given way to one of worried apprehension. And to the captain's sensitive nose drifted the rank aroma of cheap rum.

He looked at his one-man crew in angry disgust.

"You drunken, swilling idiot!" he blazed. "It's your fault that I've just been swindled out of a hundred dollars of hard earned money. If you hadn't given that dang durned stone to Puna Walla I'd still have my money in my pocket instead of a worthless hunk of glass."

Mono's eyes shone excitedly.

"You say you have the stone?" he demanded tensely.

"Yes. Why?"

Mono sank against the wall of a building and heaved a deep sigh of relief.

"I found the stone in the garbage hamper. I gave it to Puna Walla for a bottle rum. You know that, Captain?"

"Yer dang right I know it," Captain Ebenezer exploded. "I'm just telling you *I* bought the stone from Puna Walla for a hundred dollars."

"Listen to me, Captain," Mono said excitedly. "The *Gloria* has just moored at the main space wharf. I have talked to one of the hands and he has told me that a great jewel was lost on the trip from Earth to this planetoid. And the jewel has not yet been found. A reward of five thousand dollars has been offered for its return."

"And you think—"

Captain Ebenezer broke off and dug into his pocket and pulled out the big jewel.

"Of course, of course," he said excitedly. "We picked up the garbage from this *Gloria* just a few hours ago."

"I have been looking for you, Captain, ever since I have heard the news. I have been so afraid that the stone was forever lost to Puna Walla. But now everything is saved. You have the jewel."

CAPTAIN EBENEZER examined the stone closely. When he completed his inspection he dropped the stone back into his pocket and rubbed his jaw thoughtfully.

"Mono," he said, "do you know where the Widow Jones' place is?"

"But yes."

"Puna Walla is there laughing his sides out at me right now." The captain squinted carefully at Mono. "Go down to the Widow Jones' and tell 'em just what you told me about the jewel being lost on the *Gloria*."

"But—"

"And don't mention that you've seen me," Captain Ebenezer continued. "Just tell 'em about the jool bein' lost on the *Gloria*."

"But I don't understand," Mono said bewilderedly. "Why do you want Puna Walla to know this?"

Captain Ebenezer chuckled slyly.

"Ever hear of killing two birds with one stone? Now get on to Widow Jones'; I'll be at the main wharf at the space port. . . ."

CAPTAIN SCRAGG selected a position at the base of the mighty central mooring wharf and settled himself for a wait. Above him the elongated bulk of the *Gloria* was visible, stretching from the socket-like nose of the mooring wharf to the outer fringes of the planetoid's atmosphere.

Captain Scragg leaned against a packing case and cleaned his nails with a splinter. He had chosen his position with a judicious eye for the red-tuniced Federation officers who patroled the ramps of the mooring tower. He nodded genially at several of them as they strolled past. One shout would bring him all the assistance he'd need.

Fifteen minutes passed and the captain yawned. About time now. Within another thirty seconds he heard his name shouted.

Looking up, with nicely affected surprise, he saw the huge Martian, Puna Walla, lumbering in his direction, followed by the Widow Jones. Pattering after these two worthies was Mono, a worried expression on his bland green features.

"Well, well," Captain Scragg said genially, as the Martian and the Widow came to a breathless stop before him, "this is a pleasant surprise. You folks must be in a hurry."

Puna Walla's cold sharp eyes bored into the captain's.

"You have heard?" he demanded harshly.

"Heard what?" the captain asked. He looked from the Puna Walla to the Widow Jones in simulated surprise. "What's eatin' you people?" His sharp eyes did not miss the nudge that the widow gave the Martian.

"Oh, Ebenezer," the Widow Jones said, "Puna Walla got to talking over how we cheated you and we both begin to feel pretty low about it. We want to do the right thing. We'll give you back your money and take back that worthless hunk of glass."

"That is right," Puna Walla said excitedly. "We have both felt very bad. So you give us back the glass and we give you your money. After all, Captain, you are my friend, I would

not cheat my friend."

CAPTAIN EBENEZER went on cleaning his nails with elaborate concentration.

"That's right nice of you folks," he said. "But I just found that this little old hunk of glass has got a strong sentimental value. So much so, that I just couldn't think of parting with it. Thank you kindly, but it just can't be done."

Puna Walla passed a shaking hand over his forehead and looked in desperation at the Widow Jones. She shook her head in helpless despair.

"Listen, my friend," Puna Walla said. "I tell you what I do to undo the great wrong we do to you. I give you one hundred and fifty dollars for the glass. Just because my heart is big and generous."

Captain Ebenezer shook his head with a smile. He removed the stone from his pocket and held it gently between his thumb and forefinger. He regarded it as a fond father might a precocious child.

"Funny," he said, "how you develop an attachment to some dang worthless thing like this. But the fact is, you do. It'd take a lot of money for me to part with this stone now. I'm just in love with the blamed thing. Yes, sir," he sighed, "it'd take a lot of money any way you look at it."

"How much?" Puna Walla demanded hoarsely.

"Oh, shucks," Captain Ebenezer said, "I wasn't meaning for you to buy it, Puna Walla. You know it ain't worth a dime. You knew that when you sold it to me. Naw, save your money Puna Walla. Don't let that big generous heart of yours get you into trouble."

Puna Walla clenched his mighty fists spasmodically.

"It is you who are heading for trouble," he snarled.

Captain Ebenezer waved cheerfully to a Federation officer.

"Hello, Sergeant," he sang out. "Nice weather, ain't it?"

"Nice enough," the Sergeant answered, grinning.

Captain Ebenezer looked up at Puna Walla with childish innocence.

"I missed that last remark of yours," he said. "Something about trouble, wasn't it?"

"No! You misunderstanding me," said Puna Walla desperately. "I am just asking for the price of the stone."

"Oh, that," Captain Ebenezer said. He dropped the stone back into his pocket and went on cleaning his nails.

"How much?" Puna Walla cried.

"Three thousand dollars," said Captain Ebenezer, without batting an eye.

"Three thousand!" The Widow Jones almost screamed the words. "That's crazy!"

"Isn't it, though?" the captain smiled. "Who'd pay that kind of money for a piece of worthless junk?"

"NOW listen to me," Puna Walla said, desperate urgency in his voice. "I need that stone. I will pay you three thousand for it. I will give you a hundred of the dollars right now and the rest of the dollars later."

The captain smiled up at Puna Walla and went on cleaning his nails.

"All right," the words burst from the Martian, "I will give you all of the dollars." He turned to the Widow Jones. "How much money have you got?" he demanded roughly.

She handed him her purse and he jerked a roll of bills from it eagerly. He counted them hurriedly, then emptied the contents of his own wallet into his hand.

"I have only here twenty eight hun-

dred of the dollars," he said feverishly. He wheeled on the Captain. "You hear? you hear? I am two hundred of the dollars short!"

"Now ain't that a shame," Captain Ebenezer said, clucking his tongue sympathetically. "That kind of spoils the deal, don't it?"

He glanced up and his eyes narrowed as he saw that the officers of the *Gloria* were descending from the ship in the small elatube that spiraled up the mooring tower.

He pulled the stone from his pocket.

"All right," he said, "I'll be a good fellow and forget the extra two hundred. Take the stone."

Puna Walla shoved the thick roll of bills into his hand and the captain tossed him the stone.

Captain Ebenezer called to Mono, who had watched the transaction glumly, and handed him the wad of bills.

"Take this to the bank," he ordered, "and don't waste no time enroute."

MONO shrugged philosophically. He said softly, "the reward is five thousand dollars for the stone. Why did you give it back to Puna Walla for twenty eight hundred?"

The captain looked around cautiously. Puna Walla was lumbering toward the elatube entrance, the Widow Jones at his heels.

"Mono," he said, "that stone ain't worth five dollars at the most. Now get to the bank with that money."

Mono faded away like a shadow in the sun. The captain drifted after Puna Walla and the widow. He concealed himself behind one of the steel supports of the mooring tower.

The elatube door at the base of the tower opened and the captain of the *Gloria*, a tall, distinguished, gray-haired man, stepped out of the small car.

Puna Walla removed his cap.

"Pardon, sir," he said. "I would like to speak to you."

The captain of the *Gloria* looked at him with keen eyes.

"Yes?" he snapped. "What is it?"

With a wide grin Puna Walla extended the stone.

"This has come into my possession, sir. I have understanding that big reward has been offered for its return."

The *Gloria's* captain looked sharply at the stone and his blue eyes frosted coldly. A red flush crept into his lean face.

"What is wrong?" Puna Walla demanded anxiously. "When can I get my reward?"

"There is no reward," the *Gloria's* captain snapped. "That stone in your hand is a paste imitation. Its loss was a put-up job for publicity purposes. Some actress decided to use my ship and my time to get herself a few lines of space in the planetary journals."

Puna Walla's dark skin was turning pale green.

"No!" he shouted. "You are telling me the lie."

The captain of the *Gloria* stiffened.

"Watch your tongue, man," he said, and the words snapped like a cracking whip. "I've heard enough of talk about that phony jewel. Get it out of my sight."

"B—but," Puna Walla blubbered, "this is not fair—"

The officer's irritation turned to anger.

"Get out of my sight you clumsy, blundering oaf," he blazed. "If I see you on this dock I'll have you jailed for vagrancy." His glance flicked to the Widow Jones. "And take this crone with you," he said.

Captain Ebenezer Scragg beamed happily as Puna Walla and the Widow Jones left the wharf, screaming shrilly

at one another. He chuckled softly to himself as he strolled away in a different direction.

CAPTAIN EBENEZER relaxed contentedly on the *glassicade* bridge of the *Sweet Pea* as it put out from the stop-over planetoid. He wouldn't be back for several months.

Mono appeared at the door behind him.

"One question troubles this humble one," he said softly. "How did my captain know that the stone was worthless?"

Captain Ebenezer chuckled. "The dang thing chipped when I hurled it to the floor at the Widow Jones'. I noticed it when I examined it later. A real jool don't chip."

Mono sighed in admiration at the captain's cleverness.

"You are very smart, if your humble servant may say so," he said. "With such intelligence the world is yours to command if you only wish it."

"That's hittin' the nail right on the head," Captain Scragg agreed. "Just like Napoleon you might say."

"And," he added, thinking darkly of his amorous fiasco with the Widow Jones, "even he had his Josephine."

"Or didn't," Mono corrected suavely.

Captain Ebenezer grinned reluctantly and searched for his quid. He was still chuckling when Mono went below.

THE YANKEE KING

By A. MORRIS

THERE have been countless cases where Americans and Europeans have settled or been shipwrecked on south sea islands and have there risen to the rank of ruler or king But, undoubtedly, the longest and most successful reign of all was that of David O'Keefe, who ascended to the royal throne on the island of Yap.

David O'Keefe was born in Tipperary and came to Savannah, Georgia, as a young boy. Here he grew to manhood, married a Savannah girl, and soon became the proud father of a baby girl.

The spirit of adventure, however, burned within David and so he sailed from Savannah bound for China in 1871. It was not David's destiny to remain a sailor for his ship was wrecked near the Yap group of islands and David alone was rescued by the natives.

Being also somewhat of a financial wizard as well as adventurer, David soon controlled all the property of the native chiefs and thus became king of the Yaps. He designed his own regal coat of arms and official flag with the letters O'K conspicuously placed on a bright background. David never forgot that he was an American first and king of the Yaps second for even above his own royal ensign floated the American flag.

David prospered as king and soon built himself a huge castle on Terang, the main island of the Yap group. He always provided for his wife and child by sending home a large sum of money twice a year and each time renewed his vow to soon return to her and their little girl.

The chiefs of the islands soon decided that King David should have a consort for it was not right for a man to live alone and so they chose one of their most beautiful maidens as a fitting bride. Although King David protested very strongly (that's what he told his wife when he wrote her of bigamous marriage) the marriage soon took place and Queen Dollyboy took her place beside King David on the throne. Despite his avowed displeasure in taking another wife, David's marriage to Queen Dollyboy was blessed with seven fine children.

After ruling for 30 years, in 1901, King David decided to return to Savannah. He wrote his American wife that he would soon be home and set sail for Hong Kong accompanied by two of his sons. Once more destiny stepped in to upset King David's plans for he never reached Hong Kong.

No one knows what ever became of the ship except that it disappeared without a trace. After waiting for two years without receiving word from her husband, Mrs. O'Keefe, number one, sent a lawyer to Yap The lawyer found that King David's estate was valued at a million dollars and that he had wisely left a will disposing of his property. Imagine the chagrin of Mrs O'Keefe, number one, when she learned that she had not been left a single penny. Her daughter, however, happily married herself, was left a very generous legacy. The bulk of his estate was left to Queen Dollyboy and her five remaining children

KINGS OF THE ROOST

By CARTER T. WAINWRIGHT

A VERY strange bird indeed is the trumpet bird of tropical America. Although by nature a very shy bird, the trumpeter is easily domesticated and makes an ideal pet. Besides being used for a pet, the trumpeter makes an excellent "watch-dog" for poultry farms, and usually is acquired for that reason.

The trumpeter is a distant relative of the crane family possessing many crane features such as the legs and long neck. These birds are rather small—about the size of a leghorn hen—but woe be unto anyone who disputes their authority.

The tactics of the trumpeter closely resembles those of our own American gangsters. When put into a yard with poultry, the trumpeter immediately picks a fight with every rooster, gamecock, gobbler or anyone else foolhardy enough to battle. After he has cleaned up on all who would question his authority, the trumpeter takes over the yard and runs it according to his own dictates.

Now, don't misinterpret, thinking that the trumpeter is a racketeer and forces the poultry to pay him "graft" in the form of food. On the contrary, the trumpeter is an able leader and only uses his acquired leadership for the good of the yard. He leads them to their daily meals and even shares a discovery of hidden tidbits. He sees that they are safely at roost at night, but also sees that they are on the job early in the morning. Most important of all, he serves as the guard and protector of the entire yard. If any feathered marauder is sighted, the trumpeter gives the alarm in odd mellow calls to tell his flock to run for cover.

After the flock is safe and sound, the trumpeter is ready to fight the intruder who dared to threaten the sanctity of his yard. By ruffling his feathers and spreading his wings he makes himself appear twice as large and formidable to his foe. Then with a loud war cry, the trumpeter charges to the attack.

In reality, the only real weapon of the trumpeter is his extreme courage for he possesses no talons, no sharp spurs, and only a short beak, but nevertheless he always wins his battles. After the invader is put to flight, the all clear signal is given and the yard again resumes its normal activity, closely watched and supervised by the king—the trumpeter.

ANCIENT USURY

By WILLIS WHITE

INSTEAD of the usual practice of condemning our modern pawnbrokers and small loan companies when they charge twelve per cent interest on our loans, we should be thankful that we are not living in ancient Egypt where loans with interest as high as one-hundred per cent were made.

Probably the oldest written promissory note discovered was the following Egyptian document that was translated by Dr. Nathaniel J. Reich, the famous expert on Egyptian hieroglyphics:

"I, the peasant-slave Ensnohhomnew, belonging to the Zemi cemetery, have borrowed from the woman Nekhutes 22½ artabas of wheat. I promise to repay this loan with 100 per cent interest, making the total due 45 artabas of wheat. Further, I promise to repay this loan with good, unadulterated, chaffless seed-wheat, measured by the same standard as was used in making this loan; and I further promise to deliver the said wheat to the house of the woman Nekhutes in the Zemi cemetery without transportation charges, by the last day of the ninth month of year 9 with no extensions of time to be granted. Further, whatever I do not repay in wheat by the aforesaid date I will repay within the following month at the rate of 60 pieces of silver per artaba. Further, as long as this note is in Nekhutes' possession I cannot claim, unless I can show receipt, to have made full or partial payment. Further, everything that I now possess or shall acquire is herewith pledged to Nekhutes until I shall have discharged my debt in full. Further, if Nekhutes brings suit against me for failing to meet my obligation I admit additional liability for all damages. Further, the agent of Nekhutes is hereby authorized to deal with me and I promise to follow his instructions unreservedly and promptly at all times."

After reading this "air-tight" contract, one wonders if our modern lawyers could "sew" up a debtor more completely. In fact, about the only thing Nekhutes forgot to ask for was Ensnohhomnew's arm for security.

Giant figures poured from the ship

BEYOND PLUTO

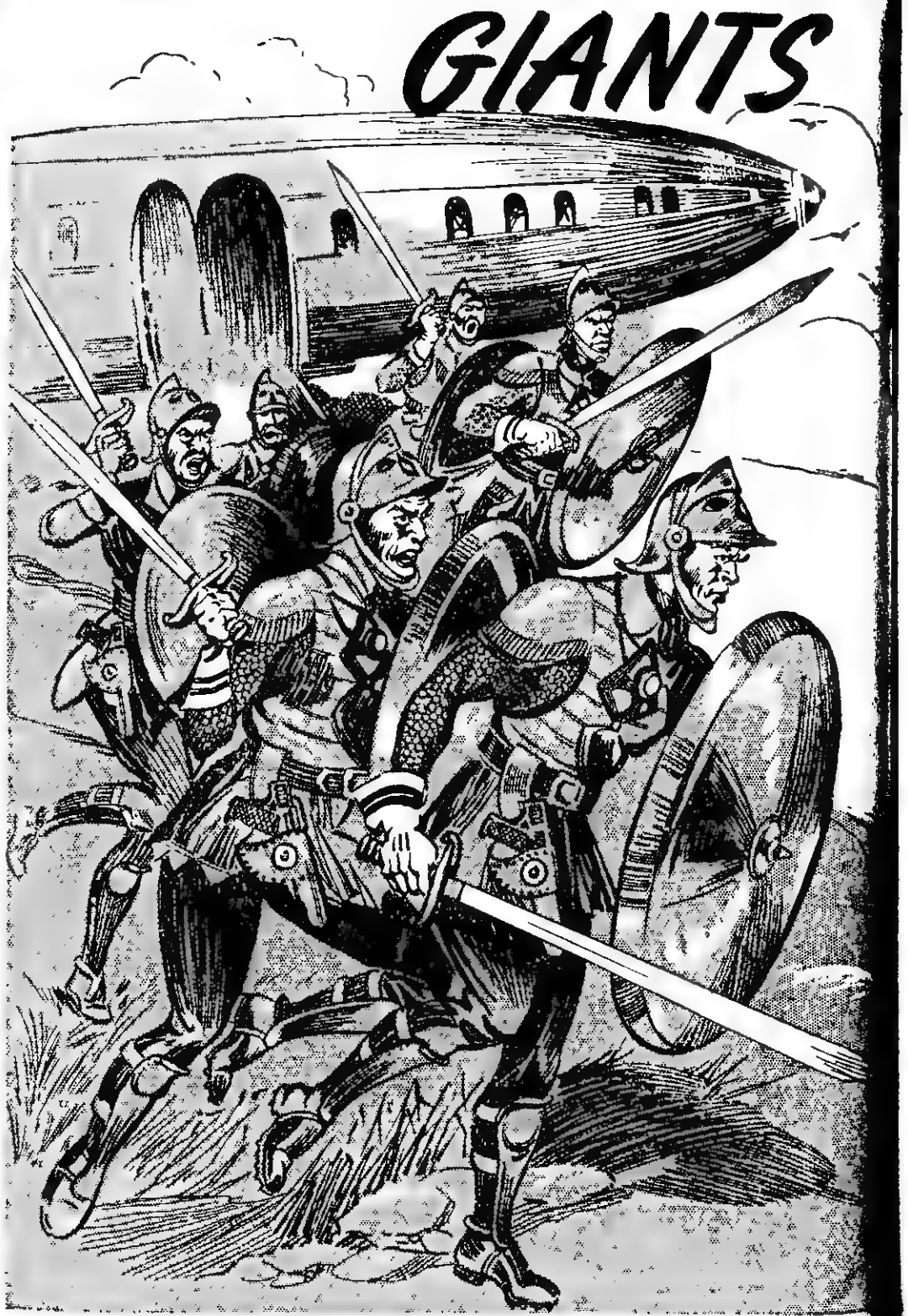
by E. K. JARVIS

"Earth does not answer!" When Otis Ludlow spoke those words, terror strode the void!

"OATS, damn it, hurry up!" Fred Vanray said impatiently. The chemist was in a hurry to get back to earth.

The little light of the distant sun squirmed through the thick glass of the observation port and, as if weary from its long journey, sprawled across the littered table. It touched the long-nosed pliers, the thin screw-driver, with which Otis Ludlow was working. It touched the tubes and coils which he was rapidly replacing in the dismantled radio receiver. His fingers, the long, supple fingers of an expert technician, were incredibly deft. They lost none of their deftness by the fact that he was in a hurry.

He worked silently, and Fred Vanray, the chemist, and Elton Ahrm, the navigator, watched in growing impatience. There was silence in all the little ship. It hung in the silence of the outer void, beyond the orbit of the



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He worked silently, and Fred Vanray, the chemist, and Elton Ahrm, the navigator, watched in growing impatience. There was silence in all the little ship. It hung in the silence of the outer void, beyond the orbit of the

planets, beyond Pluto. The ship, and its occupants, were waiting for Ludlow to finish repairing the radio receiver, which had squealed into indignant silence when a condenser shorted.

"Yeah, get a move on," Elton Ahrm added. "I want to know if that snatch we got before the set went blooie was some super thriller or whether the announcer back on earth was giving out with the truth."

"It couldn't have been an honest newscast," Fred Vanray said quickly. "We tuned into the middle of some adventure story broadcast. That's the only possible explanation. That part about thousands of people committing suicide, because of some new disease—" Abruptly the chemist lit a cigarette. "It's not possible," he ended, choking over a mouthful of smoke.

Ahrm flicked a glance at him, then looked away. "I hope not," he said. The nagivator was somewhat phlegmatic. On the surface, he didn't scare easily. Vanray was inclined to be impulsive, and showed it.

"If you two will only shut up while I put this triply-damned receiver back together, I'd appreciate it," Otis—"Oats"—Ludlow snapped. "Ah—" he said, his voice going from irritation to satisfaction as he slipped the last tube back into place. "This will settle it. She's ready to roll." He snapped a switch, leaned back in his chair, and mopped the perspiration from his forehead.

Vanray and Ahrm leaned forward.

There was a soft hum from the speaker as the rectifier tubes warmed. Then the voice came.

"*Flash!* Health service reports outbreak of insanity continuing. Physicians admit they are unable to establish what is causing this disease. The first outbreak came suddenly, without warning, and the health service was caught totally unprepared. However, resources are being mobilized as rapidly as possible and every effort is being made to cope with the malignant microbe—if a microbe is responsible."

The voice was coming from earth. The announcer seemed to choke, then came again.

"However, ladies and gentlemen, you can be certain of one thing: The health service is on the job one hundred per cent. Every physician and every nurse available have been called to duty. Specialists in microscopy, working with the electron microscope, are already seeking the germ that has caused this sudden outbreak of nervous prostrations. And they'll find it. You can bet they'll find it. They haven't failed yet. With a tradition of hundreds of years of service behind them, they won't fail now. Their suggestion to you is, above everything else, be calm. Lie down if possible. Don't indulge in violent physical exertion. And don't worry."

The announcer got his voice under control.

"That's it, folks. Don't worry. Remember the keenest minds on earth are working on this problem. They're working for you, with you. And they ask that you work with them. You can do this by remaining calm and going about your duties just as if nothing was happening. If you feel an attack of hysteria coming on, lie down and rest. Remember, also, that you are being told the facts as they develop. Good or bad, whatever the facts are, you get them. We'll have more news for you in just a—"

Click!

THE voice of the announcer went into sudden silence. A hum came from the loudspeaker.

"Damn this receiving set! It's on

the blink again." Oats Ludlow brought his chair forward with a bang. Profanely he began to dig into the depths of the radio set.

Fred Vanray's face had whitened. "It's—it's not true," he whispered.

Ahrm took a slow drag on his cigarette. He didn't say anything.

"It's an adventure story, a thriller," Vanray said.

Ahrm smoked in silence.

"It has to be that," the chemist insisted. He looked fiercely at Ahrm.

"I'm not arguing with you," the navigator said. "But—"

"But what?"

"But they don't put commercials on the beam that is radiated to space," Ahrm said tonelessly. "Not enough people out in space to make advertising pay profits. Hence, no commercials. Hence, no thrillers. News, music, yes. We're listening to the special space beam. The ordinary broadcasts, radiated to be heard on earth, don't get through the Heaviside layers. So—"

"Maybe they've changed things," Vanray said. "We've been out here beyond Pluto for seven months, exploring the trans-Plutonian bodies. Maybe —Oats," fretfully, the chemist turned to Ludlow. "Haven't you got that damned receiver fixed yet?"

Oats Ludlow was young, but he was boss of this little expedition sent out from earth to make explorations beyond Pluto. His face was lean and brown. Thoughtful now. Very thoughtful. He had quit working on the receiver. He was frowning as he stared at the radio. A soft hum was coming from the speaker.

"What's the matter?" Vanray questioned. "Can't you repair it?"

"Nope," said Ludlow. "Not anything wrong with it."

"Huh?"

Ludlow flicked ashes at the radio. "It's working," he said.

"But—"

"No beam. No radiations. Nothing to come in over the radio, so nothing is coming in."

"Hey, wait a minute," Ahrm protested.

Ludlow swung his chair around. "The transmitter on earth is not working," he said slowly. "It's off the ether."

Vanray said nothing. Ahrm blinked. "But that transmitter *never* goes off the ether," he protested. "It's in operation twenty-four hours a day. It has to be. Space ships take directional readings on it and ride the beam back to earth. If it quits working, ships will be left stranded all over the solar system."

THE navigator had lost some of his imperturbability. Worry showed on his face. He knew how the radio beam was used. It not only carried news, music, entertainment, to ships in space, but provided a never-failing compass pointing the way back home. Ships going from Mars to Earth, from Venus to Earth, from the asteroid belt to Earth, rode the beam home. Otherwise they could—and before the beam was put into operation—*had*, got themselves thoroughly lost. Out in space you could see a million, million stars. You had to pick out earth from all those blazing points of light. And, if the earth was between you and the sun, you couldn't see it at all. Under such conditions, navigation was by grunt and guess, and navigators were important people.

Because it was a sign-board of space, the beam operated every hour of every day and every minute of every hour.

"I know all about it," Ludlow said, staring at Ahrm. "The beam can't quit. But the beam has quit. It also

happens that we are just starting back home and the beam has gone off the ether before we have a directional reading on earth."

Vanray started to say something and choked it off. He jerked himself to his feet, strode to the port, and looked out. Ludlow pointed questioning eyes at Ahrm.

"Sure," the navigator said. "I can get us back. That's why I'm here, because I know navigation. I'll have to take a sight on the sun and a sight on a couple of fixed stars. Then I'll have to dig out my charts and see where the earth is and in what direction it's moving relative to us. Also I'll have to check where the other planets are and how they're moving. Then I'll establish a tentative line and we'll run down it for a while. Then I'll check again and establish another line, and —Hell, I can get us back. It may take weeks, but we're in no immediate danger, and we'll get home sometime. The thing that bothers me, Oats—"

"Is two things," Ludlow interrupted. "The fact that the beam is gone is one of them. The other is that damned newscast. Ahrm, what the hell is happening to the folks back home?"

"I don't know," the navigator said thoughtfully. "Look, Oats, why don't we call the base on Pluto? They may have some dope."

"I'll do that," said Ludlow emphatically. He snapped the switch that fed current into the transmitter, picked up the microphone.

"Calling Pluto Base," his voice droned into the mike. "Calling Pluto Base. Ship Cyclops, returning from exploring trans-Plutonian bodies, calling Pluto Base. The earth beam is off. Have you any news? Cyclops, calling Pluto Base. Go ahead, Pluto."

He cut out the transmitter, tuned the receiver, waited for an answer. Over the sub-ether radio beam, used exclusively in space ship communication because the sub-ether radiations traveled about eighteen times faster than standard radio waves, the answer should come almost instantly.

No answer came.

LUDLOW waited, and the seconds ticked into minutes. The frown on his face become more intense. Out of the corner of his eyes, he could see Fred Vanray staring from the port. Vanray's hands were balled into fists. Beside him, he could hear Elton Ahrm trying to breathe softly, and not succeeding.

Ludlow kicked current into the transmitter. Urgently he spoke into the microphone. "Calling Pluto Base. Cyclops, calling Pluto Base. Go ahead, Pluto Base."

He waited for an answer.

It didn't come.

Ludlow turned to the navigator. "We can't be very far from Pluto," he said quietly. "Will you plot a course that will take us there?"

Ahrm nodded, ducked out of the radio room. Ludlow heard the navigator's feet thud as he ran toward the control room in the nose. He glanced once at Vanray, then rose and followed.

When he entered the control room, Ahrm was already buried in a mass of charts. From the control chair, Thad Vaughn, the fourth member of this small exploratory expedition, looked up.

"What's up, Oats?" he asked. "I've been waiting for a line so I could get this crate moving."

"No beam," said Ludlow. Succintly, he told Vaughn what had happened.

Thad Vaughn was a brawny young man. Over six feet tall and muscled like a Hercules. Good natured and careless, nothing ever mattered very

much to Thad.

"What the heck is going on?" Vaughn questioned.

Ludlow shrugged.

"We're lucky," Ahrm spoke from the midst of his charts. "Pluto is almost in our lap. We'll be there in an hour."

He came across the room, silently handed a set of co-ordinators to Ludlow, who passed them on to Vaughn.

"Here's a line on Pluto," Ludlow said. "Burn the drivers off this buggy getting us there."

"Done."

Vaughn shoved the power bar gently home. In the rear of the little ship, a giant began to growl. Droning, the driving engines began to pick up speed.

II

LESS than an hour later, the drivers were groaning, as reversed, they braked the ship. Pluto was a cold shadow rising up out of the void.

The radio was still silent.

Fred Vanray came into the control room, started to ask a question, and changed his mind.

"Here's Pluto," said Vaughn, from the control chair. "I assume we will land at the base?" Ludlow nodded and Vaughn flattened out the course of the ship, sent it hurtling high above the frozen surface toward the experimental base station that had been established here on this lifeless little world.

Ludlow picked up a pair of binoculars and walked to the port. He watched the torn, frozen terrain hurtling by below the ship. Off there on a flat plain, like a tiny turtle humped up on a rock, was the concrete, steel, and glass dome of the base. Ludlow put the glasses to his eyes, thumbed the focusing screw.

He took one look, jerked the glasses away, turned startled eyes at his companions.

"What is it?" Ahrm said quickly.

Ludlow didn't answer. He looked again, to make sure. Thad Vaughn grunted, dipped the flier down toward the base, and abruptly sheered off.

"Cripes!" Vaughn shouted. "What the hell has happened down there?"

Through the glasses, Ludlow could clearly see the concrete, glass, and steel that had formed the dome. *Had formed it!* There was a hole in the dome big enough to drive their flier through. The heavy glass was shattered, the steel twisted and sheared.

Ahrm and Vanray were at the port with him. The ship was close enough for them to see with the unaided eye.

Ludlow saw the tangled mass of torn wreckage. When that hole had opened in the dome, the air had rushed out into the near vacuum of Pluto's atmosphere. The men inside. . . . Well, within minutes the temperature had dropped to absolute zero. The men had clawed at their chests, fought for air, had not found it, had found the cold instead, had died. No wonder Pluto Base didn't answer radio calls!

Refocusing the glasses, Ludlow peered through the hole into the interior of the dome. He could see two men . . . both dead. And both in space suits.

"An explosion inside the dome?" Elton Ahrm's voice was a question.

Ludlow studied the rift in the hemisphere. It was a huge round hole, with cracks radiating out from it. "No," he said. "No explosion. That hole was blown in the dome from the outside, not from the inside."

Ahrm swallowed suddenly. "Hell, Oats," he said. "Hell—"

"Shall I land?" Thad Vaughn asked.

"Yes," Ludlow answered. "There may be somebody still alive inside the dome. We may be able to help. But before we land, lift her up high."

VAUGHN set the little ship on her tail, shoved her high into the sky. Ludlow swept his glasses in a circle. Out there was space, lit by the light of twice ten thousand suns. Black space with balls of fire caught somehow in its fabric. Space, cold and grim and full of hate for all forms of life. Life ventured here on threat of instant death. Space hated life, was always waiting to snuff it out. How space must hate human beings, that, from the protection of their fragile shells of steel and quartz, thumbed their noses at it! How it must plot to wipe them out, all of them!

Out across space, Ludlow swept his glasses in a slow circle.

"Looking for someone?" Ahrm queried huskily.

"Yeah," the commander answered. "Someone who might have done *that!*" He jerked an expressive thumb down toward the shattered dome.

"That's i m p o s s i b l e ! " Vanray blurted. "There was an explosion. It couldn't have been anything else. There's nothing in the solar system that would deliberately attack a base and kill all the occupants?"

"There's not supposed to be," Ludlow answered. "But down there they're dead."

He was shaken, startled, and although he would never admit it, scared half to death. So were the others. He completed his inspection of the sky. "Set her down, Thad," he said. "I don't see anything."

Vaughn set the ship on the ground outside the blasted dome.

"Vanray, you stay here," Ludlow ordered, pulling on a heavy space suit. "Handle the lock for us. After we get out, you get on the transmitter and see if you can raise earth. Report what happened here, if you can get through. Keep in touch with us through the auxiliary set and keep on the lookout." Vaughn and Ahrm following, he clumped into the air lock.

The inner door closed behind them. Through the heavy glass, they could see Vanray's pale face as he manipulated the controls.

"Turn on the oxygen," Ludlow said.

The outer door opened. Their suits, released from the effects of the restraining pressure, puffed out as they stepped down to the frozen surface of Pluto.

The entrance to the dome was closed, but at the ground level was a huge crack in the concrete. It was wide enough to squeeze through. Ludlow stared at it, let his eyes run up the dome. Fifty feet up the crack suddenly widened. Ahrm pointed, spoke.

"Golly, Oats. That hole. Somebody from the outside drove a beam through the dome. When the beam hit, the pressure inside the base exploded the dome. But what—" Over the radio in their suits his voice trailed off as he tried to imagine what had driven a beam through the dome of Pluto base.

"I don't know what," Ludlow answered. "But hell is loose in this system. Come on. Let's go inside. We may be able to discover what happened."

They squeezed through the crack in the wall. Just inside was a man, in a space suit.

HE had been a man. Sprawled on the floor, he was frozen as stiff as an icicle. There was a long gash in his space suit. A sharp instrument had sliced through the tough, rubberized fabric and had cut the man half in two.

"Cripes!" Thad Vaughn gasped. "Something cut him half in two! What—"

He didn't get an answer.

They went on through the dome. They were the only living men in it.

There had been others. Ahrm pointed to their ineffectual attempt to man a long unused defense beam. The men at the beam did not have on space suits.

"Something attacked them," Ahrm choked. "They saw it coming, tried to line up a beam. Before they could get into action, a hole was blown in the dome. The air went. Those who were trying to get the beam into action died. Those who had enough time to get into space suits lived a little longer . . . long enough to face a landing party. What in heaven did this, Oats?"

"I don't know," Ludlow answered. "It's—it's impossible. The system is at peace. There are no pirates, no outlaws. The Martians forgot all about war thousands of years before the first space ship landed. The Venusians fight all right, but they're primitives, fighting each other. They don't have space ships. . . . All I know is we've got to get this information back to earth, fast. If we can't get through by radio, we've got to take it ourselves. Something may be happening back there."

Ludlow caught his breath. Something *had been* happening back on earth. Not an attack. A new disease. Madly he wondered if there was any connection between the disease on earth and the attack on Pluto base. He decided it was preposterous.

A new voice sounded in his earphones. The voice of Fred Vanray, back in their flier. Vanray was incoherent. "The earth beam is back on. I'll cut you in so you can listen."

A different voice started speaking, the voice of the announcer at a transmitter back on earth. Vanray was relaying it to them on the auxiliary radio of the ship. The voice was that of a man who is fighting to control himself.

"All ships in space be on the lookout. The health service reports that the epidemic of nervous prostrations is not due to a new microbe. It is not caused by a germ at all, but by the concentration of a ray of infinitely high frequency upon earth. The origin of this ray is not known and scientists are unable to trace it as yet. . . . All ships be on the lookout for a strange ship, or fleet of ships, anywhere in the solar system. Report immediately if you discover a strange vessel. Scientists suggest the beam may be originating from a ship in space. . . . The effect of the beam is to cause a rapid disintegration of nervous tissue, resulting in disorganization not only of the brain but of the secondary nervous system. . . . We were off the air because one of our technicians, driven to madness by this beam, destroyed our transmitter. We are operating now with auxiliary equipment. . . . The beam is striking a little less than half the earth. . . . There is chaos here. Suicides, wrecks, fires. All ships have been grounded to keep the crews from going mad and wrecking them. This order resulted from the wreck of the Green Star, of the line of the same name. The Green Star, crack passenger liner of the fleet, was inbound from Mars. Apparently this hellish beam struck the ship, the crew going insane. In attempting to land, the Green Star crashed. All passengers and the crew were instantly killed. . . . A terrible catastrophe. . . . All ships be on the lookout—"

Crash!

The voice of the announcer went into abrupt silence.

THROUGH his helmet, Oats Ludlow could see Elton Ahrm's face. It was the color of paste. A choked curse sounded from Thad Vaughn.

"That crash didn't come over the beam from earth!" Ludlow gasped. "It came from the ship. Our flier's mike

picked it up! Vanray!" he shouted into the transmitter in his space suit. *"Fred!"*

Vanray didn't answer.

"Something has happened to Fred!" he said. "Come on."

His heart was trying to break his ribs as he raced from the dome. Ahrm and Vaughn were right behind him. They squeezed through the crack.

"What in the hell is that?" Vaughn shouted.

A long, dark shadow was lying on the ground beside their ship. A hundred feet long, it looked like a fat cigar. A solid shadow.

And as they stared, a second shadow seemed to puff into existence beside the first one. One instant it was not there. The next second, there it was.

It seemed to puff out of nowhere. Once it had appeared, it looked solid. It nosed to the ground. An opening appeared in its side.

"VANRAY, look out!" Ludlow shouted into the microphone built into his suit.

Those two fat, cigar-shaped shadows were space ships. Small fliers, probably very fast. How they had appeared so suddenly Ludlow did not know. But he did know Vanray should have been on the alert. The second these ships appeared he should have lifted their flier into the air, blasted it from the ground. Later, if he escaped, Vanray could have returned for them.

Vanray was asleep at the switch.

Then Ludlow saw that the outer door of the lock on their ship was open. They had left it closed. At the same time something peered at them from the control room.

The second shadow, puffing out of nothingness, touched the ground, a door opened in its side. Out of that opening there came—

Giants! They were human in form, but in their space suits, they were at least ten feet tall. Giants! Six of them tumbled out of the second ship as soon as it touched the ground. They looked big and clumsy but they charged the three humans with the nimbleness of trained athletes.

Each carried a shield and a long sword!

Ludlow could scarcely believe his eyes. The sight was paralyzing. Giants! If they had charged with belching heat guns, with splashing disintegration pistols, Ludlow might conceivably have understood them. But they came with round shields and broadswords.

Once, such weapons had been used on earth. King Arthur's men, the forces under Charlemagne, the brawny warriors of Charles Martel, had used broadswords. But that was thousands of years in the past. In the thirty-first century, to use such weapons would be to commit suicide.

Giants with broadswords!

Built into each space suit manufactured on earth, for use in an emergency, was a holster carrying a small pistol. The little gun was a heat pistol, hurling a radio frequency beam that turned to heat on contact with a target.

Thad Vaughn took one look at the charging giants and went for his gun.

"Don't!" Ludlow shouted. "We don't have a chance—"

Too late. Vaughn pulled the gun. Thad Vaughn never went looking for a fight, he never hunted trouble. He was a happy, careless youngster, as good-natured as the day was long, but when he saw trouble coming he didn't stop to think.

The gun throbbed in his hand.

The first giant was almost on top of Vaughn. He saw the gun drawn, lifted his shield. The beam splashed against

the metal, spluttered in harmless fury. A shield, even in a fight involving modern weapons, was a handy thing. The warrior caught the beam on his shield.

His long sword flicked out.

THE sword was a good eight feet long. A human would have lifted it with difficulty. Lifting it even against the lighter gravity of Pluto, a man would never have been able to use it effectively. In the hands of the giant who owned it, the sword seemed to be as light as a toothpick.

Thad Vaughn saw it coming. He tried to squirm aside, to dodge. It caught him, went through the tough fabric of his space suit, went through him.

Ludlow choked in helpless fury. He went for his own gun, saw a sword coming toward him, and barely had time to raise his hands over his head. To attempt to resist would be to commit suicide.

It was all over in an instant. Before Thad Vaughn could fall, three swords went through him. He screamed once, then his voice gurgled quickly into silence.

Oats Ludlow and Elton Ahrm, hands above their heads, were looking at the sharp points of swords. The points gestured for them to move. Gloved hands jerked the pistols from their holsters, shoved them toward their ship.

Inside their flier were two giants. They had gone through the air lock. Fred Vanray, an ugly bruise on the side of his head, was just recovering consciousness. "Oats . . ." he muttered dazedly. "That broadcast . . . The Green Star crashed . . . Oats, it crashed . . ." For the first time, he seemed to see the giants. "What—what happened? Where did these things come from? Who are they?"

"They came while you were listening to the radio," Ludlow said. There was more he could have said, but he checked himself, suddenly remembering that the Green Star had gone down. There was pain in his eyes as he looked at Fred Vanray. And he had no heart to give Vanray hell for being so dazed at what he had heard over the radio that he forgot to keep alert . . . Ludlow turned to the giants.

"What the hell is this?" he demanded.

He got no answer.

Using magnetic grapples, the two ships lifted the Cyclops from the frozen surface of Pluto, headed into space.

"Where are they taking us?" Vanray asked. The chemist was still in a daze. He seemed not to comprehend what had happened, or not to care.

Ludlow didn't answer. He went to the port, looked out. The giants guarding him watched every move but did not attempt to stop him. He could see Pluto far below them. The two ships were lifting the Cyclops with perfect ease, heading into the vastness of empty space.

It was this same emptiness that Ludlow had surveyed before he landed on Pluto. He hadn't seen the two ships. But they must have been somewhere near and they must have seen the Cyclops.

Suddenly space was no longer empty. Suddenly it seemed to be filled with a vast bulk that obscured the stars. "Look!" Ludlow gasped.

Ahrm came to the port.

"A ship two miles long!" he whispered.

SHE was lying at rest in the void, a vast construction, at least two miles in length. The ships were lugging the Cyclops straight toward her and an opening was yawning in her side to receive them.

"How did we happen to miss seeing that thing?" Ahrm demanded.

"Invisible," Ludlow answered. "She seemed to puff into existence, just as the two ships that got us puffed into existence. They were holding her invisible—bending light rays around her will account for that—so we didn't see her. Great grief, Ahrm! She's so big she carries ships the size of the Cyclops as life boats!"

Big, bigger than anything ever built on earth, bigger than anything ever built in the solar system, the huge ship lay in the void. Now that they had approached near it, they were inside the screen of invisibility, and it could be clearly seen. Like a huge cigar it lay in lifeless space. Rows of lighted ports twinkled away along its vast sides.

Abreast, the three ships went through the gaping port in the side of the space monster, eased down into what looked like a landing field. Cradled on one side, each in its own stall, were dozens of fliers of the size that had carried the Cyclops here.

"It's a flying fleet!" Ahrm gasped.

The lock opened. A giant looked in. He spoke rapidly to the ones in the flier. They turned, gestured to the humans.

"I think they want to talk to one of us," Ludlow said, interpreting the gestures. "I'll go."

Head up, he stepped into the lock. It closed behind him.

Watching through the port, Ahrm saw him striding off, surrounded by giants.

IV

FRED VANRAY was pacing restlessly inside the radio room. Vanray's face had a faintly yellowish tinge. His eyes were open but he did not seem to see.

Elton Ahrm huddled dispiritedly in a chair. The ash tray at his elbow was full of cigarette stubs but he was not smoking. Tobacco had lost its taste. He waited, and tried to think, and then tried not to think.

Over two hours had passed and Oats Ludlow had not yet returned.

The giants had quitted the Cyclops. They had searched it carefully first, peering and prying into every locker, into every hidden corner, removing every weapon. Then they had left the Cyclops, leaving Vanray and Ahrm alone, like trapped rats in a cage.

Outside the ship a careless guard paced back and forth. He wasn't much interested in the humans. Seemed to consider them beneath his notice, to despise them.

Vanray tried the radio again. No sound came from the speaker.

"It won't work, Fred," Ahrm said dispiritedly. "The metal hull of the big ship serves as a shield. Radio waves can't get through it."

Vanray sighed.

What are they, Ahrm thought. Slavers? A warrior race ranging space? Where did they come from?

The navigator swore at himself. He was thinking again. He mustn't let himself think.

"I wish to hell they'd bring Oats back," he muttered. Without Ludlow, he felt lost.

Vanray started pacing again. Ahrm looked at him, then looked away, looked through the port, saw the careless guard out there. He didn't want to see that, either. He shut his eyes.

When he shut his eyes, he started thinking, which was worse than looking. His mind kept trying to reason about this race of giants that had spawned miraculously within the system. Perhaps they hadn't come from within the solar system. Perhaps they

belonged to a planet circling another sun, lost somewhere in the void of space? No. That was foolish. It would take too long for them to cross the void. True, humans had ships that would cross it, given time, but they had not crossed it yet. That was for the future. Lack of speed held them back. Earth ships could not approach the speed of light and a speed greater than light was necessary to cross the void. It was impossible. No object could travel faster than light.

He wished to hell Oats would come back.

Oats knew a hell of a lot. Oats was a physicist.

Would Oats ever come back?

AHRM doubted it. To this race of giants, humans were little more than bugs. Perhaps, somewhere within this vast ship, they were dissecting Oats, cutting a muscle here, and watching what happened, slicing a nerve there.

Perhaps, after they finished with Oats, they would come for Vanray and him. He wondered which they would choose first. Vanray looked like he wouldn't give a damn.

There was a clang from the lock. Ahrm jumped to his feet. Oats Ludlow was leaning against the inner door of the lock. They had brought him back.

Ahrm helped him through the lock, led him to a chair. Oats sprawled into the seat. His face was purple, his heart pounding so hard that Ahrm could hear it.

"I'm all right," Oats whispered. "Or I will be—in a few minutes. The air the Gorlii breathe is—heavy with oxygen. . . . It burns up a man. Give me a cigarette."

"Gorlii?" Ahrm whispered, grabbing cigarette and lighter at the same time.

"Yes," Ludlow answered, sucking gratefully at the smoke. "That's what they call themselves. A pleasant people—to be in hell!"

"What did they do to you, Oats?"

"To me? Nothing. Just asked me questions. That was why they took us alive, so they could ask questions. They attacked the base on Pluto, to get a prisoner for questioning, but the landing party got too enthusiastic. . . . Then we came along and they took us. They want to know about the solar system, and about earth."

"About earth? Don't they know anything about it?"

"Not much. Only what they've been able to discover through high power telescopes. How far is it to 61 Cygni?"

"61 Cygni?" Ahrm was rattled. "That's a star. It's about seven light years away."

"That's where the Gorlii came from," Ludlow said.

"Oh, hell, no," Ahrm protested. "They couldn't have come from there. It's too far, take too long. Oats, you're off—"

"My nut? No. They came from a planet circling 61 Cygni. I talked to the high panjandrum, to the big shot, the Boss— You ought to see him! He sits on a throne, with guards standing at attention all around him. His chest is covered with metals and his face is covered with—scars. I thought I've seen some tough people, but he is far and way the toughest I've ever seen. . . . Yes, they came from 61 Cygni. The Boss told me so. The trip took about three months. They move faster than light. I know. . . . I know. . . . It can't be done. But the Gorlii do it. They're starting accelerating now, moving in on earth."

Ahrm's face was a mass of wrinkles. As a navigator, he knew astronomy, and astronomical distances. "All right," he said. "If you tell me they move

faster than light, I'll believe it. I'm almost ready to believe anything. But what do they want? What are they? Slavers? Traders? A warrior race?"

Ludlow grunted. "They're slavers, if they can use a conquered race. They're warriors, if they can find somebody to fight. But they're so damned powerful they can't find a race that will give them a fight. In consequence, they're hunters. They're looking for a new hunting ground right now. All their old hunting grounds, the planets of their own system, are worn out. No game left."

"Game?" There was horror in Ahrm's voice.

"Big game," Ludlow answered stolidly. "Back on earth, game refuges are still maintained in the heart of Africa. Sportsmen go there, make safari, hunt under the same conditions as our ancestors centuries ago. The Gorlii are hunters too . . . of human game. . . ."

LUDLOW choked over his cigarette, coughed. "This is a sporting expedition, a safari across space. Hunters coming down the sky. Earth will be good hunting, as long as the game lasts. . . . When they sent me away, they were excited no end. Even the Boss was excited. They had found a whole solar system swarming with game."

For minutes, Ahrm was stunned. That another race might find good sport hunting humans had not occurred to him. Then he burst out.

"The damned fools! They'll find they're taken the tiger by the tail! Do they think we are defenseless? Don't they know that we've got space ships too? When they tackle earth, they'll run into something worse than a hornet's nest. They'll find the sky full of fighters. Not little ships like this one we were using. Battleships, cruisers, destroyers. Nothing as big as the ship of the Gorlii, but a thousand times more numerous."

His face lit at the thought. He hated war, but he came of a warrior race. For centuries there had been peace in the Solar system. But the tradition of war was not forgotten. There were ships, and men to fly them. Fighting ships and fighting men!

"They'll find a hot reception!" Ahrm said.

Slowly Ludlow shook his head. "No," he said.

"What do you mean? We've got plenty of fighters!"

"But no men fit to fly them," Ludlow said. "You seem to have forgotten. Earth is being bathed in a beam of high frequency radiation, which causes insanity. We've got the ships -but there will be no crews to man them!"

There was sudden silence in the flier.

"Is that beam coming from this ship?" Vanray spoke for the first time.

"Yes," said Ludlow. "They decided the human race would be plenty tough, so they sent along ahead of them a beam designed to soften us up. Only organized opposition can defeat the Gorlii. And you can't organize fighting forces if half the planet is suffering from nervous prostration."

Vanray stared at Ludlow. He shook his head. His lips suddenly narrowed into a knife line. Burning lights appeared in his eyes. His hands balled into fists.

From far-off in the vast ship came a mighty drone, a deep-throated bass roar. Engines warming up, building up energy. In some vortex seething forces were surging to life, forces strong enough to move unguessed tons of steel across space. Perceptibly, the ship began to move.

Vanray turned on his heel. Ludlow

saw a little trickle of blood from the corner of his mouth, and he knew the chemist had bitten his lips until they were bleeding. His sympathy went out to the chemist. But there wasn't anything that could be done about it.

"But isn't there anything—" Ahrm gulped.

Oats Ludlow shrugged tired shoulders. "I tried to convince them that peace was better than war, that there was nothing to gain by attacking, conquering, destroying. . . . They laughed at me. Sport is what they want, sport with the long sword. They have power beams and other powerful weapons, to use if they meet a strong enemy, but what they want is sport. They use their beams to reduce the outer defenses—if there are any—then go in with the sword. They don't mind dying, if they can die fighting, and they don't see why any other race should mind. If people don't want to fight, they're slugs to be trampled under foot. . . . Work? A Gorlii never conceived the idea, unless it was in the building or the manning of a fighting ship. . . . Work? Worlds of slaves for that!—"

LUDLOW came to his feet, fist smacking into his open palm with a sharp cracking sound. "If we had time to devise a defense, we'd give them the fight they want. We are a peaceful people, but there would be merry hell in this part of the universe if we had a chance to man our fleets!"

His voice changed as he spoke. It had grown stronger, and there were rumbling undertones in it. Defiance mingled with helplessness. If only he could do something! But what could he do? Three humans against the massed might of the Gorlii!

Far away in the vast liner the engines roared louder, pushing the ship toward earth at constantly increasing speed. How long would it be before the Gorlii reached earth? At a speed faster than light, it would take perhaps five or six hours, counting the time consumed in building up speed and in losing it when they wished to halt. Five or six hours—faster than light—

How in the hell did they manage to travel faster than light, Ludlow wondered.

As though in answer to his question, the note of a giant harp flooded through the ship, a long held boom that echoed and then boomed again. It was a signal of some kind.

Ahrm looked up questioningly. At the port, Vanray turned. Outside the ship Ludlow saw the guard. At the sound of the gong, he had left off his pacing and was standing rigidly at attention, as though waiting.

Like a flash of light, an attack of dizziness struck Oats Ludlow. A million different pains tore at him. He felt as if every atom in his body was suddenly trying to turn over. A vertigo struck him. Nausea twisted his stomach. Blindness like a blanket folded over his eyes.

As suddenly as it had come, the vertigo passed. Ludlow grasped at the radio bench for support. At the port, he saw Vanray holding on. Ahrm was picking himself up from the floor. They had felt it too.

"What—what the hell happened?" Ahrm gasped.

"A Wallachian field," Ludlow answered. "The Gorlii set up a Wallachian field. That's why the gong was sounded, to warn everybody that the field was being set up."

"A what?" Ahrm rasped.

"A Wallachian field," Ludlow answered. Seeing the look on Ahrm's face, he quickly explained. "Sorry. I forgot you hadn't specialized in phys-

ics. A Wallachian field is— You know that an electro-magnet, when current is set flowing through its coils, sets up a magnetic field around its poles. Well, that magnetic field is a rough analogy to a Wallachian field. It takes its name from Wallach, who discovered it. It's a force field. When it is being set up, the rays of force flowing out from the center of generation, distort and slightly compress all matter within the field. If a human being is within range, it makes him sick as the devil for a few moments. Then the effect passes, but the distortion remains as long as the field is being generated. Holy cats!" Ludlow gasped. "That's the answer!"

"The answer to what?" Ahrm demanded.

"The answer to how the Gorlii travel faster than light," Ludlow answered.

THE tired droop had gone from his shoulders, the hopelessness from his eyes. "We have known for centuries that matter cannot travel faster than light. Einstein, I think, developed the first equations on the subject. Later researches showed that the reason matter could not travel faster than light, was because the instant it did attain that speed, it ceased to be *matter*, as we know it, but slipped into the negative energy levels. In other words, matter can go faster than light, but if it does, it isn't matter any longer. The Gorlii have overcome that difficulty. They establish a Wallachian field around their ship, and the pressure of this field holds them and their ship out of the negative energy levels—"

"So what?" Ahrm asked, bewildered. "This Wallachian field enables them to go faster than light. What is there about that to make you so excited, Oats?"

Ludlow *was* excited. He was breathing rapidly, his face flushed. He looked through the port at the guard, then whispered. "A Wallachian field is an unstable space condition. It can be collapsed. If, when this ship is traveling faster than light, the protective field is collapsed—"

Ludlow stopped, stared at Ahrm. There were new, hard lines on his face.

Off in the vast construction, the mighty engines howled anew, hurling the ship and its hunting horde toward new fields of game.

V

ELTON AHRM watched. Two hours had passed and Oats Ludlow was still working. Oats had torn the guts from the radio transmitter, he had ripped coils from the receiver, he had raided the supply chest for all the silver and copper wire in the ship.

On the bench from which the radio had been removed, an instrument was taking shape. Ludlow was building it, fitting the parts together with incredibly deft fingers.

"Oats—" Ahrm ventured.

"Shut up!" Ludlow answered.

He went on working. He had no time to talk.

In the vast liner, the driving engines had ceased howling, and had settled down to a resonant hum. The ship had reached its speed. It was flying faster than light.

Outside their little flier, a guard lolled. The three humans were scarcely worth the compliment of a guard.

Uneasy apprehension in his eyes, Ahrm watched Ludlow. As did every earthling, he had a groundwork in all sciences, including physics. He was beginning to be afraid that he knew what Oats was building.

Ludlow suddenly quit working.

"It's finished," he said.

Neither Ahrm nor Vanray said any-

thing. Ludlow's face was grim.

"This is a generator," Ludlow said, pointing to the device he had constructed. "It sets up oscillations that will collapse a Wallachian field."

Deeper lines appeared on his face as he spoke. "You might call it a bomb," he said. "It will have the effect of one—the biggest bomb that was ever built. To set it off, all you have to do is close this switch."

For an instant, he hesitated, then his voice was strong. "There is a guard outside this ship. I am going to lead that guard a merry chase away from here. While he is gone I want you to take our flier through the main lock." He looked at Ahrm and Vanray.

"I get it," said Ahrm slowly. "You want us to take our flier and scat. Meanwhile, what will you be doing, Oats?"

"I'll be busy," Ludlow said evasively.

"Um," said Ahrm thoughtfully. "You know, we do have an excellent chance to escape. The Gorlii think we are so unimportant they don't even bother to watch us closely. Yes, we have a chance to escape—*all three of us.*"

"Just escaping won't help the folks back home," Ludlow said slowly. "The Gorlii don't care if we escape, because they know we can't do anything if we do get away. In fact, they would probably like to have us escape—more game to hunt. The point is: you and Fred have a job to do. When you get back to earth, you are to make a full report on everything that happened. Especially you are to tell our scientists about the Wallachian field, so they can investigate it more thoroughly. That is very important. And that is why you have to escape."

LUDLOW paused, his eyes drilling into Ahrm.

"What about you?" said Ahrm.

"I'll be busy," Ludlow said.

Ahrm shook his head.

"This is an order," Ludlow said.

"I don't care if it is an order!" Ahrm blazed. "You damned fool, don't you think I know what you're going to do? You're fixing it so Fred and I will escape. *You'll* stay here. You'll set off the bomb. You and this whole damned ship—" Ahrm shivered. "I don't know what will happen but I know you're not staying here. *I'm* the one who will do that. And don't go chucking your rank around. I don't give a damn if you're the grand admiral of the whole earth fleet!"

Ahrm spoke fiercely, angrily.

Ludlow's face was grimmer than ever. "You'll do as I say—"

"You're both wrong," Fred Vanray interrupted. "I'll do the staying."

The chemist had taken no part in the argument. He had been in a daze ever since the Gorlii appeared. Now he walked over to the instrument Ludlow had built. "Is this the switch, Oats?" he asked. "Is this the switch that sets it off?"

In the heavy silence that followed there came from the distance the bull bellow of a mighty engine, an engine tuning up in preparation for braking the ship. The sound drove Ludlow almost to distraction. He knew what it meant. The Gorlii were coming in to earth. The ship was beginning to slow in preparation for a landing.

"You two listen to me!" he snarled. "I'll do the staying."

"Nope," said Elton Ahrm.

"Oh no," said Fred Vanray.

Ludlow stared at them. They were both defiant. "No time to argue," he decided. "I'll cut a piece of wire into three lengths. We'll draw. The short piece stays."

From the table he snatched a length

of silver wire, cut three lengths from it, rolled them in his hands.

"Draw!" he said, thrusting toward the chemist his closed fist with three pieces of wire sticking out from it.

Vanray drew. He turned his back to look at the length.

Ludlow thrust his hand toward Ahrm. "Draw," he said. "I'll take what's left."

Fascinated, Ahrm's hand went out. He looked at what he had drawn, gasped, quickly closed his hand.

"I have the short one," said Ludlow, quickly inspecting the remaining piece of wire.

"Do you?" said Vanray, turning. "If it's any shorter than the one I have, I'll eat it. There. Look for yourself." On the radio bench he threw a piece of wire. It was less than half an inch in length.

It was the short straw.

"Damn it, Fred—" Ludlow gasped.

THERE was the ghost of a smile on Vanray's face. "It's the right answer," he said. "I should be the one who stays. If you two should escape, Ahrm will be needed for navigation. You, Oats, will be needed to tell the physicists about the Wallachian field. Me, I won't be needed at all—"

There was such a smile on Vanray's face as goes through dreams.

He picked up the generator, strode to the lock, went through it. Fascinated, Ludlow watched. He saw Vanray leap out and start running. He ran toward the stalls that housed the fliers.

The guard saw him. For an instant, the fellow looked startled. Then he grinned. This was going to be fun. Drawing his long sword, he ran after Vanray.

"To the controls, Ahrm," Ludlow shouted. "Lift her toward the lock. It's now or never."

While Ahrm lifted the flier, Ludlow leaped from the port. He ran to the massive gate set in the side of the vast ship. The controls were simple. He shoved the lever that opened the inner door. The huge mass of steel began to slide aside. Ahrm jerked the Cyclops into the lock. Only the outer door remained to be opened. It would open when the inner door closed. Ludlow shoved the bar that closed the inner door, jerked the one that opened the outer door.

He looked back.

"Goodbye, Fred," he called.

He looked for Vanray. But the chemist was out of sight among the fliers. The guard was running around them looking for him.

Suddenly the doors that led to the heart of the liner opened. Rank after rank of Gorlii appeared in them, wearing space suits and full fighting equipment. Landing parties coming to man the small fliers for the descent to earth.

Hunters going forth for game.

They saw the Cyclops in the lock.

For an instant they stared, then a quick command rapped out. Wheeling with the precision of perfectly trained soldiers, the Gorlii ran to man their fliers.

Oats Ludlow jammed himself through the lock into the Cyclops, leaped to the control room. "I'll take over," he shouted. Ahrm jumped out of the control chair. Ludlow's hands closed over the controls that fed power into the drivers.

The outer door, the gateway to space outside, was opening. Slowly it was sliding aside.

Would it open in time? Would the Gorlii succeed in closing it before it opened wide enough for the Cyclops to pass through? It seemed to move an inch at a time. Ludlow cursed it.

Would it never open?

Another thirty seconds—less than that—it would be open.

IT STOPPED moving! It started in the other direction, began to close.

The Gorlii had reached the levers that controlled it. The door was closing.

Ludlow jammed the power bar. With a roar the drivers took hold. The Cyclops seemed to leap ahead. The opening was not quite wide enough. The slim little ship smashed into it, widened it. There was a screech of tortured metal as the sides of the Cyclops scraped against the closing door.

The flier stopped moving. It was caught in the door.

The groaning drivers bucked, jerked. Steel screamed. The Cyclops leaped forward. It had torn its way out. Like a crazy bronco, it bucked its way free of the ship.

"Give her the gun!" Ahrm screamed.

She already had the gun. She had spurs in her side and was running wild. The drivers were raging with the load they carried. Ludlow fought the careening ship. He had to counteract the speed of the liner before they left the protection of its field. He jerked the nose of the Cyclops around. The power bars were heavy in his hands as he fought for control of the ship. He had to win. Had to!

He won. The Cyclops righted, began to respond to the controls.

"There's a flier coming out of the lock!" Ahrm shouted, looking back. "They've got a ship out."

"Let him come," said Ludlow grimly. "He'll have a hell of a time catching us."

He yanked the Cyclops away from the Gorlii liner, set it in mad flight through open space. Looking back, he could see the fat cigar that was the flier, nosing out from the vast bulk of the liner.

"Watch the big ship!" he shouted at Ahrm. "Unless Vanray fails, it ought to happen any second."

The great bulk of the space monster was dwindling rapidly in the distance. Off to one side, but in the direction it was traveling, was a huge green ball. Earth! Wreathed in clouds and showers, sapphired with seas, green with spring on the plains, earth lay there in space, her polar ice cap glistening in the sun light. Home for earthlings. Hunting grounds for the Gorlii.

"God!" Ahrm gasped. "Look!"

The Gorlii ship was gone. Off yonder, where it had been, was a vast puff of mushrooming light. It was as if some gigantic bomb had exploded there, a bomb weighing millions of tons. As if a nova had suddenly come into existence. Puffing, boiling smoke riding streamers of white, bursting light.

"It worked!" Ludlow gasped. "Fred turned on the generator, collapsing the Wallachian field. The ship was traveling faster than light. With no protection, it dived headfirst into negative energy, exploding in a burst of gamma rays—"

THE puff of light was still mushrooming out, still flaring, still puffing. Incredible energies were being released there, seething vortices of flame and limitless fury were leaping into existence. For hours it would continue to expand there in space. Then it would die down.

The pursuing flier suddenly veered. Like a startled horse, it raced back toward the puffing flame, veered up to circle it, veered abruptly away, raced out across space, running like a dog with its tail between its legs.

Ludlow was dropping the Cyclops

to earth, an hour later. Ahrm came from the radio room in the control nook. Ahrm's face was green. He held an open palm toward Ludlow. "Look there," he said.

Ludlow looked. He saw a short piece of silver wire.

"It's—it's the piece Fred drew," Ahrm choked. "Oats, you remember he turned his back on us after he drew. Oats, you can see tooth marks on that piece of wire. Oats, Fred bit that piece of wire in two, so he could get the shortest piece!"

"Oh, Lord," Ludlow gasped. It was silver wire. It was easy to bite in two. He could see the tooth marks on it.

"Why did he do it?" Ahrm asked.

"I didn't know he did it," Ludlow whispered. "But now I know why. He had a girl back on earth. He was in a hurry to get home to her. They were going to be married as soon as he returned. She was coming home too, coming from Mars, to meet him. She was on the Green Star, Ahrm, the ship that crashed when the Gorlii beam hit it."

There was pain in Ludlow's eyes. "The Gorlii killed Fred's girl, in the crash of the Green Star. He had just heard the news when the Gorlii attacked us, back on Pluto. That was why he wasn't watching, wasn't keeping lookout. That was why he fooled us, why he died. So he could get a shot at the slugs who killed her."

Out in space flame was still puffing from what had been the Gorlii ship. Ludlow shook his fist at it.

"Hunt in hell, you dogs," he said. "Hunt in hell."

AMAZING FACTS

By ALEXANDER BLADE

THE FIRST ALARM CLOCK

THE first alarm clock ever used by man was the ingenious invention of the Chinese. They made a rope from twisted grass and placed knots at regular intervals in the rope. The sleeper then placed the rope between his toes at the time when he desired to awaken. The rope was then lit and the heat of the burning rope would awaken the sleeper at the correct time. Of course, if the person were a very heavy sleeper, he usually burned himself, but at least the alarm served its purpose of awakening the sleeper.

* * *

NOT THAT TOUGH

ALTHOUGH the diamond is 80 times harder than any other material in the known world, an expert blow will split it.

* * *

TOMB WITH A THOUSAND DISHES

A FRENCH expedition, upon opening a Syrian tomb found over a thousand dishes. This sets an all time high for any excavations as far as burial dishes are concerned.

M. E. L. Mallowan, a British archæologist, offers one solution. He believes that the two persons buried in the tomb were deeply worshipped and for generations food and offerings were brought in the pottery.

Large quantities of goat bones were also found in the tomb which might be another solution to the earthenware dilemma, as the tomb might have been a place of sacrificial ritual, where feasting took place.

The tomb is believed to have been constructed about 1800 B.C. Mr. Mallowan believes it is even older—perhaps 2500 B.C

* * *

NATURAL EASTER EGGS

THE poultry department of Cornell University has crossed a white leghorn hen with an Araucana fowl, a South American hen which lays dark blue eggs, and have produced a new type which lays light blue eggs.

* * *

PHONE AMPLIFICATION

LONG-DISTANCE *operator 57 at Columbus calling New York.* From Columbus to New

York is approximately 700 miles. When a long-distance telephone call of this length, for example, is made approximately 3,000 loading coils are used to amplify the voice of the person talking. Each amplifier multiplies the volume of the voice ten-fold. This amplification is roughly equivalent to the magnification of a single atom of hydrogen to fill the entire solar system.

* * *

MUSIC IN THE AIR

THE ever resourceful Chinese thought of a way to make their surroundings more cheerful—this was long, long ago—and before the Japs crawled in.

A favorite custom of the Chinese was to attach musical whistles to the tails of their domesticated pigeons which produced a pleasant music as the pigeons flew about. By tuning the whistles in harmony, various sounds could be produced as desired. Each person tried to outdo his neighbor by having his pigeons produce the loveliest sounds. The air was continually filled with music—a much more pleasant sound than that of Japanese bombs.

* * *

NATURE IN REVERSE

HERE'S one male that doesn't spend tortuous hours pacing up and down a hospital corridor while his mate goes through the pangs of child-birth. For this creature actually takes the ordeal from the female and gives birth to their offspring. This strange animal is the hippocampus, better known to aquarium visitors as the "seahorse."

Besides this strange peculiarity the "seahorse" can look two ways at once, swims, has a tail like a monkey, the shell of a beetle and the head of a horse

* * *

PILLOW THAT SINGS A LULLABY

A SPONGE rubber pillow that sings and talks to an ear placed upon it is a product of a radio company in New Jersey. Its intended use is for hospitals

A radio unit within the pillow is connected to a central radio receiver So quiet is this type of installation that only the patient with his head on the pillow can hear the radio program

* * *

MUSIC FROM SILVER THREADS

VIOLIN bows, which have been strung with horsehair ever since the Middle ages, may soon give way to a new form of an old material.

Violinists have been experimenting with bows strung with silver wires of hair like fineness, slightly roughened on their surfaces to set the violin strings vibrating. It is found that a sensitiveness and brilliance of tone are achieved that excel the effects usually obtained from the old horsehair bows.

* * *

GRAIN FIRE WORRY RELAXED

A METHOD of fumigating grain in storage without incurring a fire hazard is an outstanding achievement of present-day scientists. The fumigant is a mixture of solid carbon dioxide, or "dry ice" and ethylene oxide. Tests by commercial handlers of grains have proved the value of the method, which is economical and superior to the more familiar carbon disulfide treatment of grain, due to its non-inflammability.

* * *

COPPER

A COPPER alloy containing about 2 per cent of chromium when properly heat-treated has a highly increased strength and hardness, yet retains 80 to 90 per cent of the heat conductivity of pure copper.

Copper also improves lead. Adding 0.06 per cent of copper to common lead improves its physical characteristics and its resistance to general corrosion.

* * *

BETTER TEMPERED SHAVERS

CORROSION rather than use has been found to be the cause of dull razor blades. A new method of preventing the corrosion of razor blades and thus saving the shaver's temper has been found which consists of adding a material to the shaving cream to prevent this corrosion. The addition of potassium chromate or other corrosion inhibitors to the shaving cream is reported to materially prolong the useful life of the blade

* * *

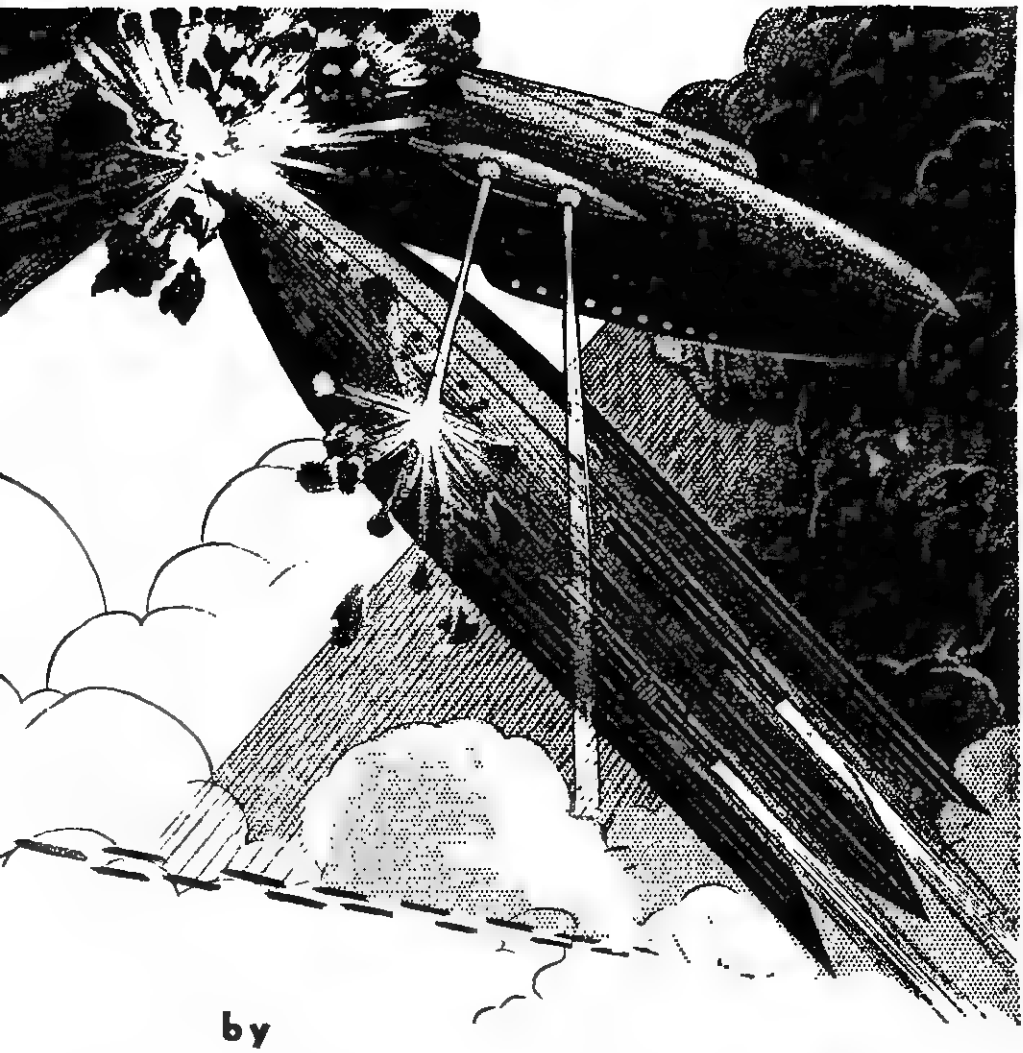
DEATH OF LEPERS

STRANGE as it may sound, lepers do not always die from their leprosy but most frequently succumb to some other disease. Of the 36 patients that died during the year at the National Leprosarium, located at Carville, Louisiana, only 11 deaths were attributed to leprosy. The remaining deaths (about 70% of the cases) were caused by tuberculosis, pneumonia, and other ailments not considered nearly as deadly as leprosy by the average layman

Blindness is quite a common occurrence among lepers for some reason still unknown to medical science. It is also strange that in almost every autopsy performed upon a dead leper the liver is found to be diseased, yet few lepers ever complain of liver trouble. Experts at the Leprosarium believe that the liver trouble is caused by the changes in the lepoid content in the blood—a condition common to lepers.

Convoy
IN SPACE
Earth and Venus were at war, and it was vital that Space Lane 7 stay open; it was Earth's only lifeline!
Raymond JONES

Like sharks the raiders struck at the convoy



by

WILLIAM P. McGIVERN

MACE McALLISTER was a big, deep chested man with a hard square face and an unruly thatch of brick red hair. Seated at the desk in his tiny dusty office with his big fists resting like mallets on the arms of his chair, he looked grim and angry.

As agent for the Intra-Planetary Space Freight Co. his job was to keep the vital flow of materials moving to the Earth troops marooned on Asteroid Belt 10—the first line of defense against the hordes of sub-human creatures from Venus. The only route to the all-important defense belt of asteroids was Space Lane 7—and keeping Lane 7 open and the supplies moving was Mace McAllister's headache.

He looked up as the office door banged open and a tall, lean dark-haired man entered and jerked off a leather helmet.

"There're not here yet," the new arrival announced.

"How the hell do they expect me to operate ships without pilots," Mace exploded. He banged a heavy fist on the desk top. "The brass hats have been

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"How the hell do they expect me to operate ships without pilots," Mace exploded. He banged a heavy fist on the desk top. "The brass hats have been

promising me five replacement pilots for the last three months, and they're not here yet."

The dark-haired man shrugged and sat down on a chair near the wall. His face was thin and seamed with wrinkles; his blue-black eyes were inscrutable. He looked at Mace in silence.

"Reese," Mace addressed the other man quietly, and there was hint of weariness in his voice, "you've been blasting through Lane 7 for three months now, delivering the goods to the men on the Belt. The fact that you're still alive is a major miracle. None of the pilots who were here when you arrived are still alive."

Reese shrugged. "I'm a pretty good space pilot," he said quietly.

"You're a damn good pilot," Mace said. "The best I've ever had here. But without replacement we can't last much longer. You know that as well as I do."

Reese lit a cigarette, then said, "the replacement pilots are due today, aren't they?"

"Sure," Mace growled, "they're supposed to be here today, but they were also supposed to be here three months ago. All we get from Earth is promises."

"It's a long haul from Earth," Reese said. "Pretty hard trip in these times."

Mace stood up impatiently and started pacing.

"I know, I know," he said. "They've got just as tough a job as we have. This planetoid is midway between Earth and Venus and it's no snap when the fighter planes of every planet are blasting on sight at everything in the void. And why the hell should pilots volunteer to run the gauntlet of Lane 7?" he said with sudden bitterness. "It's a suicide trip, nothing else."

"I'm still alive," Reese said.

Mace looked at him. "You know your business," he said. "Some of these raw kids I get haven't even had combat training."

"They'll get it in Lane 7," Reese said.

"They'll get it in the neck," Mace said. He sat down again and jammed a pipe between his teeth. "We haven't sent any U-235 to the Belt for months," he said.

Reese put out his cigarette. "I noticed. What are you saving it for, the fourth of July?"

MACE shook his head and stared at his big fists.

"Can't take a chance on losing it. We have to be damn sure that stuff gets through. In another few weeks the men defending the Belt won't be able to fire their guns or operate their rocket ships. We've got damn near ten tons of U-235 here but it's all we're going to get for a while. If that gets blown up in Lane 7 it's curtains for the boys on the Asteroid Belt."

Reese nodded. His dark eyes were alive with interest.

"Why don't you let me take a crack at it? Load up the fastest ship you've got and I'll blast through alone. The Venusian scout ships won't be expecting a thing. I think it's worth a chance."

Mace shook his head. "Too risky," he said. "I've got another idea but it's no good unless I get some pilot replacements."

"Okay," Reese shrugged and lit another cigarette. "You're the boss."

"It's a nasty situation," Mace said. "If we don't keep Lane 7 open and supplies moving the men on the Asteroid Belt are as good as dead right now. In another few months Earth can get troop and space ship reinforcements out there—but if we don't get that U-235 to the Belt soon, reinforcements won't do any good."

"You're right," Reese said quietly. "There won't be anybody left to reinforce."

Mace sighed and moodily regarded the scarred top of his desk.

"It's quite a responsibility," he said heavily. "It gets you at night when you try to sleep."

"Why don't you chuck it?" Reese asked.

Mace smiled wryly. "You can't run away from a thing just because it's tough. I learned that lesson in the void years ago."

"I didn't know you'd been a pilot," Reese said.

"I was commander of a Federation squadron for six years," Mace said. "Put in ten years with the Feds all together."

"A desk job must seem pretty tame after that," Reese said. There was a new glint of respect in his eyes as he looked at the other man. "The Federation patrols are damned exciting, I imagine."

Mace grinned reminiscently.

"And a lot of fun, too."

Reese said, "why did you leave?"

"Eyes and hands were slipping," Mace said heavily. "I didn't want to wash out so I resigned." He grinned wryly. "At thirty you're an old man in the Federation. That was three years ago."

REESE started to speak, then stopped and listened. A faint humming sound was barely audible in the warm office.

"There's a ship coming in," he said. "Might be our replacements."

Mace sprang to his feet and strode toward the door. There was an excited spark of hope in his eyes.

"Maybe," he said. "Maybe."

He jerked open the door and stepped outside onto the flasky soil of the planetoid. He saw that several men were standing by at the single mooring tower.

In the hazy dusk he could see the slim shape of a ship slicing through the planetoid's atmosphere. The bright sparks from its rocket exhausts left a trail of fiery streamers in its wake.

The repulsion rockets of the incoming ship blasted suddenly and the speed of the ship diminished perceptibly as its nose veered slightly toward the looming bulk of the planetoid's mooring tower.

Mace peered upward and tried to make out the ship's insignia.

Reese standing behind him said quietly, "that's your ship, all right."

"Can you see the markings?' Mace asked.

Reese said, "yes."

"You've got better eyes than I have," Mace growled. "Well thank the Lord they're here at last. We can use 'em. You'd better go over and take charge. Reese. Send the pilots here as soon as possible. I want to talk to them. And by God if any of them are still using teething rings I'll lose what's left of my mind."

Reese grinned and sauntered toward the mooring tower. Mace stood in the doorway for a few seconds, then he turned and entered his office. His jaw was hard as he sat down behind his desk. There was a big job ahead and now he had some men to do it.

CHAPTER II

Surprise!

MACE interviewed the five replacement pilots one at a time. The first three were young, but their records indicated that they were thoroughly competent. The fourth pilot was a short, chunky man with a red face and an easy grin.

He was older than the others.

"Name's Wallace," he said, shaking hands with Mace.

"Glad to have you," Mace said. "This is no snap here, you know."

"So I've heard," Wallace said. He tossed a file of recordings on Mace's desk. "But I've been around quite a bit. I don't think I'll be dead weight here."

Mace went through the reports and found them excellent. The man had had a vast amount of experience in the void, that much was evident. He felt very grateful. He wasn't often this lucky in replacement pilots.

"Swell," he said. "Judging from this you'll be a big help. Reese will show your quarters and help you get settled."

Wallace nodded and walked to the door. "Shall I send the last pilot in?" he asked. There was a faint grin on his face that Mace didn't miss.

"Sure," he said. "What's funny?"

"Nothing," Wallace said. "Nothing at all." But he was still grinning as he walked out of the office.

Mace shook his head, puzzled. Then he went to work on the forms scattered about his desk. He was still absorbed in this work when the door opened and the fifth pilot walked in.

Mace looked up and his jaw fell disgustedly. The last of the replacement pilots was nothing but a kid, ridiculously small in bulky space clothes. White soft face with big brown eyes and a skin that wouldn't know a razor for several years.

Mace banged his fist on the desk in his disappointment.

"Who the hell sent you up here?" he barked. "This isn't a kindergarten, this is a fighting base."

"I'm aware of that," the pilot said quietly. "Perhaps you'd better look at my qualifications before you make up your mind about me."

MACE smothered his angry disappointment and grabbed the sheaf of credentials and licenses from the pilot's gloved hand.

He flipped through them quickly, grudgingly admitting to himself that they were all in order. Dale Mason, 22 years of age, extensive private craft experience, that was the gist of the data. This might not be so bad after all, Mace thought. Lord knows he'd gotten worse.

He looked up from the papers and his eyes opened wide. A ludicrous expression of stunned amazement spread slowly over his features.

For the pilot had removed the close-fitting leather helmet—revealing long, beautiful blue-black hair that fell in swirling waves to her shoulders.

Mace stared helplessly, unable to speak. His hard square features turned a slow red and his big hands balled into heavy fists.

"Is anything the matter?" the girl asked. She sat down and crossed her legs. Mace couldn't help noticing the lithe grace of her movements, but he was in no mood to be appreciative.

"You're damn right there is," he snapped. "Perhaps you can tell me the meaning of this joke."

The girl was lighting a cigarette. She looked up through a haze of blue smoke and said coolly, "what joke?"

Mace stood up angrily.

"I asked Earth for fighting pilots, not adolescent girls," he said bitterly. "This isn't a pink tea party I'm running here."

The girl's level brown eyes studied him calmly but her pale cheeks were lighted with points of angry color.

"My licenses and credentials are in order," she said. "My application was approved by the Earth selection bureau and I was appointed for service here. What more do you want?"

Mace stared down at the girl, his jaw grim.

"Get this straight: I don't give one damn about Earth's selection bureau. They sent you up here, but I'm sending you back."

THE girl jumped to her feet, her eyes smouldering in her pale face.

"That's not fair," she cried. "You've got to at least give me a chance."

"Impossible," Mace said shortly. "It's too dangerous."

"Do you think I'm afraid of the risk?" the girl asked scornfully.

Mace looked at her a humorless smile on his lips.

"I wasn't thinking of you," he said. "I was thinking of the supplies and equipment. I can't risk a shipload of vital materials by putting them in the hands of a silly, romantic girl."

"I've had more actual experience than half of your pilots," the girl said stormily. "You're no right to discriminate against me just because I happen to be a woman."

Mace ran his hand through his rumpled red hair in an exasperated gesture.

"That's reason enough," he said ironically.

The girl picked up her leather helmet with a swift, angry motion.

"It's easy," she said, "for you to send me back to Earth. But what of your pilots who're operating short-handed right this minute? The guns on my ship might save one of those pilot's lives. And what of the men defending the Asteroid Belt? The supplies and ammunition I could bring there might save a hundred lives, might give some chance to men who don't have a chance now."

Mace frowned. The girl's arguments were hard to answer. Did he have the right to refuse *any* pilot who could help carry aid to the Asteroid Belt?

"I don't suppose those things concern you," the girl continued in a blaze of anger. "You sit here in a warm, safe office, far from any actual battle, and your stupid prejudice is keeping supplies on the ground when they might be heading for the Belt. But that doesn't bother you. As long as you're in a nice comfortable spot I suppose you're quite happy."

Mace fought to control his rising anger. He could feel the pulse at his temple throbbing heavily. If a man had spoken those words to him he would have broken him in two, but now he held himself in check.

"Is that all?" he asked.

"Yes, that's all," the girl answered. "You can send me back now whenever you like.

Mace regarded her steadily.

"I'm not going to send you back. Report to pilot's barracks and I'll see that a room is prepared for you. I'm going to take you at your word and give you some of the action you're asking for. I'll let you know when I want you. That's all."

The girl returned his gaze unwaveringly.

"I'll be ready," she said. She paused with her hand on the door. "I'm sorry you don't want me here, but I won't let that make any difference in my work."

Mace didn't answer and the girl left the office and closed the door after her.

MACE stood up and lit his pipe, a worried frown on his face. He paced up and down the small room for several moments, clouds of blue smoke billowing about his head. Finally he took his leather jacket from a peg on the wall and left the office. He walked to the pilot's barracks and stopped in front of the small shack occupied by Reese.

He knocked and Reese's voice said, "come in."

Mace entered and nodded to Reese who was stretched out on a narrow iron cot.

Reese said, "What's up?"

Mace frowned and sat down.

"Hell to pay," he said. "We got a skirt with the last batch of pilots."

Reese smiled thinly. "So I noticed," he said.

"It's a problem," Mace said, sighing. "I won't use her unless I have to, but it looks like I might have to pretty damn soon. How many of our last convoy returned?"

"Three," Reese said. "We lost four ships and four pilots."

"Fortunately it was on the return trip," Mace said. "The material got through all right. But it leaves us short of pilots. If I send a convoy tomorrow I'll have to use the girl."

Reese raised himself on one elbow and lit a cigarette carefully. His thin-seamed face was sharp with interest, but his dark eyes were inscrutable.

"So?" he said softly.

"I don't want her to pilot the decoy ship," Mace said. "Can that be arranged?"

Reese shrugged. "Why not?" He grinned wickedly. "Any lottery can be fixed so why not this one?"

Mace reached into his inner pocket and drew out a shining black marble. He tossed it to Reese.

"Talk to the men. If it's not okay with them then the whole thing's off, understand? I can't very well ask them to take an extra chance on their lives, but you can."

Reese slipped the black marble into his pocket.

"I'll talk to 'em. There won't be any trouble."

Mace drew a relieved sigh.

"Thanks, Reese. I won't forget this. Talk to the men and then round up the girl and bring them all to my office. We'll hold the drawing in my office tonight to see who pilots the decoy ship on this trip."

"Okay," Reese said. "We'll be there in about an hour."

Mace nodded and walked to the door.

"Incidentally," he said, turning, "I didn't ask if this was all right with you."

Reese grinned wryly.

"It's okay with me. Leaving the girl out of the drawing for the decoy ship will slim down the odds a bit on the rest of us staying alive, but what the hell! I'm lucky."

"I hope you stay that way," Mace said. He left then.

CHAPTER III

Blackball!

MACE sat behind the desk in his office and blew clouds of smoke from the stubby black pipe in his teeth. He felt nervous and strangely tense. Reese had not shown up yet with the replacement pilots, but even as Mace was wondering about it, the office door banged open and Wallace entered with the three young replacement pilots following him.

Wallace's round, good-natured face was blandly curious.

"Action already?" he asked, smiling.

"Of a sort," Mace admitted. He motioned the four men to chairs and shoved a square earthen jug to the center of his desk.

Then he settled back in his chair and waited. He couldn't proceed until Reese and the girl showed up. This was one of the toughest jobs he had to face. Time after time he had sat here and watched a man draw a black marble from the earthen jug on his desk —and that black marble was the next

thing to a death warrant. For the man who drew the one black marble was the man who piloted the decoy ship on the perilous trip through Lane 7.

He looked at the three young replacement pilots. They were all eager, anxious for battle. All clean-cut, courageous youngsters—heading for death.

Mace shook his head and puffed angrily on his pipe. Wallace, the oldest of this crop of replacements, was a little different story. He was a seasoned veteran, a man who had lived much of his life and for whom death would be just another adventure. But it was tough on these kids. And it was tougher on Mace to send them out trip after trip, knowing that some would never return.

His thoughts were interrupted by the entrance of the girl, Dale Mason, and Reese.

He nodded to them both, then swung his gaze around to the three young pilots and Wallace.

"We can go ahead now," he said quietly. He wondered fleetingly if Reese had talked to the men about the drawing. He flicked a glance toward Reese but he learned nothing from his thin, expressionless face.

He put his elbows on the desk and covered the top of the earthen jug with his two big hands. Everyone in the room was watching him intently.

"We're here to play a game," he said deliberately, "but before we go ahead I want to say a few things to you. With the exception of Reese, you men are preparing to make your first trip through Lane 7 to the Asteroid Belt. Your job is very simple in some respects. You take off from this planetoid and follow a beam directly to the mooring towers on the Belt. That's all there is to it. However, as you probably realize, hundreds of Venusian fighting ships are patrolling these areas, trying desperately to break this last supply route to the Belt. So far they haven't succeeded. They haven't succeeded because we're using a system that, so far, has gotten at least fifty per cent of our ships through. Reese here, has made practically every trip through Lane 7 in the last three months. I'm going to ask him to explain the system we use. He's better qualified for that than I am."

REESE lounged against the wall and lit a cigarette deliberately.

"It's not very intricate," he said quietly. "We simply send a dummy ship with the convoy. That ship is heavily armed but very slow. It is also the largest space ship in the convoy. Generally an old freighter. It falls behind the regular convoy and draws the fire of the Venusian ships. Its size, plus the fact that it is so heavily armed, serves to convince the enemy that it is a rich prize. Actually it is unloaded and manned by only one pilot. It's an easy target. That's all there is to it. The decoy ship is lost but the convoy gets through."

Mace looked around at the pilots.

"Understand?" he asked.

Wallace leaned back in his chair, smiling cheerfully.

"Sure," he drawled, "but doesn't the pilot of the decoy ship have any chance at all?"

"He has guns and ammunition," Mace answered. "Sometimes he gets through. Reese has had the decoy ship twenty times and he's still alive and kicking. But practically every other pilot who's taken the decoy ship out hasn't returned."

"I'm kind of lucky," Reese said quietly.

"Obviously," Wallace grinned.

"How do you decide who takes out the decoy ship?" Dale Mason asked.

Mace looked briefly at her and noticed that her face was set in pale stiff lines. But her eyes and voice were steady.

He looked back to his hands which were still folded over the earthen jug.

"A good question, Miss Mason," he said. "The pilots making the convoy draw for it. In this jug under my hands are six marbles. They are all alike, except that one is black. The others are white. You six in this room will leave tomorrow morning at dawn for the Belt. Tonight you draw to determine who pilots the decoy ship. Fair enough?"

"Suits me," Wallace drawled.

"Certainly," Dale Mason said.

The three young pilots nodded.

"Ladies first," Mace said.

"Why?" Dale said quickly. "I don't want any special advantage."

"There'll be no advantage," Mace said patiently. "It's as easy to draw the black ball on the first try as it is next to last."

DALE looked uncertainly about the room and all of the men nodded their agreement. She shrugged her slim shoulders.

"If you want it that way," she agreed quietly.

Mace removed one hand from the mouth of the jug.

"Go ahead," he said. He had no worries about her drawing a black ball for there was no black ball in the jug. Reese had the black marble in his possession.

With set jaw the girl reached into the jug, but Mace could feel the trembling of her hand as it brushed against his own. He felt a moment of quick compassion for her. He had seen space hardened veterans blanch during this drawing. It was a pretty tough deal for a young girl.

She drew out a marble, looked at it, then rolled it on the desk. It was white.

"That eliminates you, Miss Mason," he said.

Reese stepped up to the desk.

"I'll take a crack at it now if no one minds," he said, with a faint grin.

The girl rubbed her forehead and turned away from the desk. She didn't see Reese slip a black marble from his pocket and drop it in the jug before drawing. But Mace did and he felt a sudden relief.

This was as good a plan as any. The girl would go first in future drawings and there would be no possibility of her drawing a black marble. Reese could follow her and drop the black marble into the jug before drawing himself. It was the only thing that he and the men could do. Sending men out to what was almost a certain and horrible death was bad enough, but none of them could look at themselves in the mirror if they sent a young girl to the same fate.

Reese shook the jug slightly to circulate the marbles, then drew. It was white.

"I said I was kind of lucky," he smiled.

"Obviously," Wallace said.

Reese tossed the white marble onto the desk and Wallace stepped up. "Let's see how lucky I am," he said. He reached into the jug and drew out a marble. He looked at it and the faint grin on his face faded. He stood for a moment, his fist closed tightly over the marble, then he rolled it onto the desk before Mace.

"Obviously not very," he said with a wry grin.

The marble that he had dropped from his hand was black.

MACE looked at Wallace carefully. "You're it," he said.

Wallace shrugged carelessly.

"It's okay with me. Maybe I'll get through. Reese has been lucky. It might work that way with me. And anyway, who in hell wants to live forever?"

He sauntered to the door, a grin on his round, red face.

"See you in the morning," he said. He opened the door and walked into the darkness of the night.

"The rest of you had better turn in," Mace said. "Your ships will be ready in the morning."

The three young pilots filed out and the girl followed them. Mace motioned Reese to remain.

When the door had closed on the pilots he said to Reese, "Thanks a lot. I gather that you talked to the other men about the drawing."

Reese nodded. "They were all agreeable. As long as she draws first there's not a chance of her drawing a black marble. I go second, drop the black marble into the jug and the drawing goes on as normal."

"Fine," Mace said. "We'll keep it that way."

"Okay."

Reese strolled to the door.

"By the way are you shipping the U-235 tomorrow?"

"Nope. Can't take a chance. It'll have to be soon, though."

"The men on the Belt are running awfully short," Reese said idly.

"I'll have to figure something out," Mace said worriedly. "I don't want to send it in a regular shipment. I'm afraid the enemy will be getting wise to our decoy ship in a few more trips. Maybe on the next convoy I can work out something."

"Okay," Reese said, "see you in the morning."

"Good luck," Mace said. He went out, banging the door.

CHAPTER IV

Six Ships Into Space

THE next morning Mace stood at the door of his office and watched the six space freighters blast off, one by one, from the planetoid's central mooring tower. Reese was in the lead ship, followed by the girl. Mace watched anxiously as the slim speedy ship piloted by Dale Mason disappeared into the void, a shower of sparks trailing in its wake.

Wallace blasted off last. Piloting the lumbering, heavily armed decoy freighter. The first five ships had vanished into the void and were well on their way to Lane 7 when his ship roared sluggishly through the planetoid's atmosphere.

Mace jammed his hands into his pockets and entered his office. The six ships were gone now, heading for the treacherous dangers of Lane 7, and there was nothing he could do about it. He felt a moment of irritation as he stared at the work awaiting him at his desk.

He felt no stomach for forms and correspondence this morning. He lit his pipe and sat down heavily. A hell of a note. A hundred pound girl blasting through the void, carrying the vital supplies to the Belt while he sat at a desk charting courses and sending reports to Earth.

"Damn it!" he muttered.

He glowered at the confusion of his desk, his mind worrying the problem of how he was to get the desperately needed U-235 to the embattled men on the Belt.

He devised and discarded a dozen ideas without coming close to any solution. His thoughts were interrupted then by the jangling of the mail machine in the corner of the office.

It was a square metal receptacle, constructed of heavy riveted steel. Inside the receptacle was a materialization unit which reassembled the dematerialized matter flashed through the void from Earth. Mace made the necessary adjustments on the receiving rheostats. A moment later a thin, wax-sealed letter slid into a groove at the base of the metal box.

Mace picked it up. It was addressed to Guy Wallace, care of Mace McAllister, agent Inter-Planetary Space Co. He thought of Wallace, blasting through the void at the controls of the decoy ship and he wondered if he would ever read this letter. He shook his head in irritation. Thinking like that didn't help anything. He tossed the letter onto his desk and went to work.

THREE days later, as the swirling hazy dusk was shrouding the planetoid, Mace walked out of his office and peered into the sky. A space ship was flashing into the planetoid's atmosphere. He found himself automatically clenching and unclenching his hands. This was the first of the convoy to return.

He barked out crisp orders to the ground mooring crews and kept his eyes glued on the in-coming ship. When the ship moored Mace walked toward the tower anxiously.

A long, bulky figure swung down from the hatch in the belly of the ship and Mace recognized the lean, fatigue-drawn features of Reese.

Mace walked up to him and Reese grinned faintly.

"Pretty tough trip," he said.

Mace asked the question he had dreaded to ask himself during the last three days.

"Did the girl get through?" He held his breath and his fists tightened as Reese pulled off his heavy helmet and lit a cigarette.

"The girl made it," Reese said. "She'll be in in a minute. She was only two or three degrees behind me."

Mace felt an illogical feeling of relief flooding over him. Why he should care so much for the safety of a girl he had only seen twice in his life was a question he couldn't answer.

"How about Wallace?" he asked.

"Didn't make the Belt," Reese answered matter-of-factly. "The rest got through okay. Lost two of those young replacement pilots on the way back."

"Damn," Mace swore softly. "Three out of six. We can't keep this up."

"The men on the Belt wanted to know about the U-235," Reese said. "The commander there said they can't last another week without it."

Mace's jaw hardened. "They'll get it," he said. "I think I've got a scheme doped out that might get it through."

"Good," Reese said, "what's the idea?"

"I'll tell you this evening. I'm going to have to send you back to the Belt tomorrow."

"Are you going to let me take the stuff alone?" Reese asked.

"That's not my idea," Mace said. "I'm going to send a complete convoy."

Reese looked disappointed, but he only said, "you're the boss," and walked away toward his sleeping shack.

MACE turned to a ground man.

"When Miss Mason moors tell her I want to see her," he said. Then he strode to his office. In three or four minutes he heard the whistling shriek of a ship cutting through the planetoid's atmosphere, and five minutes after that his office door was opened and Dale Mason entered.

"Did you want to see me?" she asked.

Mace glanced up and noticed that she had removed the bulky space suit

and was wearing a pair of slacks and a loose blouse. Her face seemed terribly pale. There were deep blue shadows under her eyes and drawn lines of fatigue about her mouth. She seemed strained to the limits of her endurance.

"Better sit down," suggested Mace. "You look tired."

"I'm all right," the girl said. But she moved to a chair and sat down. She leaned back and closed her eyes.

"How'd it go?" Mace asked.

"All right," the girl answered dully.

"Feel up to a trip tomorrow?"

The girl opened her eyes slowly. For an instant Mace thought she would protest, but then her jaw hardened into bitter lines.

"Sure, why not?"

"I'm sending a full convoy out tomorrow morning," Mace said. "We've got to get U-235 to the Belt."

The girl stood up and passed her hand wearily over her forehead. Her eyes were dull and sunken.

"All right," she said quietly. "I'll be ready."

She started for the door but before she reached it, her step faltered and she swayed. She put her hand to her eyes and took another step.

Mace shoved his chair back and jumped to his feet, but he was too late. The girl's knee's buckled and she fell limply to the floor.

Mace bent swiftly and gathered her slight form in his arms. Her head rolled limply against his shoulder as he shifted her into a chair. He crossed the room in two strides and filled a glass of water and returned to her side.

HOLDING her head in the crook of his arm he forced a few drops of water through her lips. Then he chaffed her wrists until her eyelids fluttered open.

"Easy now," Mace said gently.

The girl looked at him and then shook her head wearily.

"Did I faint?"

Mace nodded. "You're exhausted. You need about twelve good hours of sleep."

"It isn't that," the girl said. "I thought I was tough and hard when I came up here. But seeing those ships burned to cinders in the Lane got me. Those young pilots, just boys—it's too awful . . ."

She turned her face from Mace and began to sob.

Mace patted her shoulder awkwardly. There was nothing he could say that would help, so he remained silent.

After a while the girl stopped crying. She wiped her eyes with a handkerchief and stood up. Her swimming eyes avoided Mace's.

"Why don't you say it," she demanded, almost angrily. "I'm a silly, hysterical, adolescent girl, just as you said. Why don't you say 'I told you so'?"

"Because," Mace said quietly, "it isn't so. You've got guts and I'm the first to admit it. Now get to bed."

The girl turned to him slowly. The bitterness in her face faded. There was a dazed, incredulous light in her eyes. Her mouth was tremulous.

"I—"

"No more talk, now," Mace said. I'll see you in the morning. Are you still willing to hit the Lane again at Dawn?"

The girl smiled. It was the first time Mace had seen her smile and it lighted up her entire face with a soft glow. He realized suddenly that she was very beautiful.

"I'll be ready," she said. She opened the office door slowly and paused. "Thanks," she said quietly, then she stepped into the night.

CHAPTER V

Lane 71

AT FIVE the next morning, Earth time, Mace sat behind his desk and studied the pilots who faced him. The office was cold and unpleasantly damp. Glaring light was provided from a single unshaded bulb in the ceiling.

Mace puffed on his pipe in silence. The earthen jug was before him on the desk with its contents of five white marbles concealed by a piece of paper.

Reese was lounging against a wall, next to the girl, Dale. Three other pilots were in the room. One of them was the remaining member of the recently arrived replacement group. Already, he looked older, hardened and slightly bitter.

Mace swung his eyes about the circle of faces.

"The trip you are making today," he said slowly, "is the most important convoy shipment we've ever sent. Ten tons of U-235 is being sent to the Belt. If we fail to get it there we're signing the death warrants of the men defending the Belt. You'll draw in the usual manner. Then I'll explain how we're going to get the U-235 through. Miss Mason, you're first."

The girl stepped to the desk, a faint smile on her lips. There was a peculiar expression of cynical amusement hovering about her eyes as she reached into the jug and selected a marble.

Mace knew that there was no black marble in the jug, but he couldn't fathom the girl's expression. It was as if she were laughing at them all. He frowned as the girl withdrew her hand. The marble was hidden in her small closed fist.

"Well?" he asked sharply. "What is it?"

The girl smiled slowly. "I appreciate what you men have done, but that's not the way I play."

Without glancing at the marble she tossed it on the desk in front of Mace. He looked at the marble bewilderedly.

For it was black!

Mace looked sharply at Reese. "There's been some mistake," he said quickly.

REESE walked to the desk, for once his expressionless poise broken. His eyes were excited and a bead of sweat stood out on his forehead.

"I'll say there has been," he said grimly. He reached into his pocket and flipped another marble onto the desk. It also was black.

He turned to the girl, almost angrily. "What's the idea?" he demanded.

The girl looked at Reese and then glanced at the other pilots. She was smiling.

"I know you men decided to save me from drawing the decoy ship," she said softly. "It was swell of you but—it isn't right. I've got to take my chances along with everyone else. I'd be dead weight if I didn't. I unintentionally overheard a conversation between two pilots and I learned then that the black ball was to be removed before I drew. So I got another black ball." She turned to Mace. "I took it out of your desk drawer. I hope you won't mind. I had it in my hand when I reached into the jug. And that settles it. I pilot the decoy ship."

"But you didn't have a chance," Reese protested angrily. "You knew you were going to draw the black ball. You held it in your hand all the time."

"That's right," the girl said. "That was the only way I could make up for the break you gave me on the first drawing. That time I couldn't have drawn the black marble because it wasn't in the jug when I drew. This

time I had to make sure I drew it."

Reese's face was strained.

"You'll be shot down without a chance," he said hoarsely. "I refuse to let you do it. I'll pilot the ship myself."

"No," the girl said, "I can't let you."

"You must," Reese said anxiously. "I insist."

Mace had sat in silence, watching the scene. Now he said, "just a minute Reese."

Reese turned and glared at him.

"You aren't going to let her go through with foolishness, are you?"

"Yes," Mace said, "I am. And if everyone will calm down I'll tell you why. We aren't using a decoy ship this trip. I've changed our plans in order to get the U-235 through to the Belt."

The girl turned to him in sudden anger.

"Where does that leave me?" she demanded.

MACE fought for patience. "Listen and you'll soon know," he said. "Instead of using the empty freighter as a decoy we're going to load it with the shipment of U-235, double its rocket power and blast it through Lane 7 under full speed. The idea is this: The enemy has become accustomed to attacking the decoy, the clumsy freighter that brings up the rear of the convoy. This time the freighter —souped-up with extra power—will lead the convoy into Lane 7 and blast for the Belt. Sheer surprise is the big factor in the favor of the ship getting through. Miss Mason seems to be the one slated to pilot that ship."

Reese said, "How do you figure that?"

"Simple. She drew the black ball that gave her the decoy freighter. The decoy freighter is the one used for the U-235. Same ship, different assignment, that's all."

"It's too dangerous for a girl," Reese protested. His thin face was darkly angry.

"It's not a particularly dangerous run," Mace said. "In fact the pilot with the U-235 shipment has the best chance of getting through."

"It's a big job for a girl," Reese said. "Do you think she be able to handle it."

Mace stood up and looked at Reese.

"I'm the judge of that," he said quietly. "You aren't forgetting, are you, who the hell's running this show?"

The blank expressionless mask slipped again over Reese's thin face. But his dark eyes were smouldering.

"I haven't forgotten," he said. "You're the boss."

"It's a good thing to remember," Mace said. He looked at the other pilots. "You're leaving as soon as possible." To the girl he said, "the decoy freighter has been loaded with the U-235. Test your extra rocket power before you get to the Lane, then give the ship all she'll take."

She nodded quietly and slipped on her helmet.

The three pilots filed out of the door. Reese, with an inscrutable glance at the girl, followed them. Mace put his hand on the girl's arm.

"No point in telling you how important this is," he said. "You realize that. This isn't a fight talk. I just want to say 'good luck.'"

"Thanks," the girl said softly. She seemed about to speak, then she turned suddenly and slipped through the door.

CHAPTER VI

Treachery!

MACE stood in the doorway of his office until the five-ship convoy

had disappeared into the trackless depths of the void. As usual the clumsy, bulky freighter had blasted-off last—but this time the powerful rear propulsion rockets of the decoy had hurled the ship away like a thunderbolt. With the girl at the controls it would soon overtake the regular convoy and when the flotilla reached the hazardous Lane 7, it would flash into the lead. That, at least, was the plan.

With a scowl on his face Mace returned to his desk. Something vague and nebulous was plucking at his mind, disturbing him strangely.

He couldn't figure out what it was. He shook his head in irritation and plunged into the work of bringing some order to the scattered reports on his desk.

In a few minutes he came to the letter that had been sent from Earth to Guy Wallace, the replacement pilot who had been lost on his first trip to the Asteroid Belt. He had forgotten about it completely. He turned it over, then held it to the light. It bore no return address and it apparently contained an ordinary correspondence paper.

He shrugged and slit open the envelope. He spread open the letter and his eyes widened as he recognized the official crest of the Federation on the paper. The letter read:

Wallace:

Proceed at once with arrest. Reports here confirm your suspicions. Urgent that you act immediately. Ackerman, alias, Reese, definitely in league with enemy. Proceed with full authority.

The letter was signed by Lieutenant Sheffield, commander of Earth Intelligence.

Mace rose to his feet, his hands gripping the edge of the desk. His mind was swept by a maelstrom of conflicting thoughts. The full impact of the letter was like a stunning physical blow. He felt a weakening nausea.

Reese a traitor!

It couldn't be possible! There was some ghastly mistake. There must be! But the evidence of this letter was damning.

WITH an oath, Mace jammed the letter into his pocket and charged out of the office. He didn't stop running until he reached the shack where Reese had slept. Jerking open the door he stepped inside and a cold fist of terror closed over his heart.

Reese's room was stripped bare. Clothes, papers, equipment, instruments—everything was gone!

Mace stood in the center of the small room, feet spread wide, trying desperately to adjust himself to the horror of the situation. Bit by bit scraps of conversation, pieces of incidents returned to him, falling into the place with damning precision, until the jumbled jigsaw was complete.

Reese had been after the U-235. That seemed definite. Mace groaned as he remembered Reese's eagerness to make the flight with the precious explosive alone. Failing in that he had undoubtedly learned of Mace's plan to send the U-235 in the decoy ship and had planned to draw the black ball himself —the black ball that would have given him the pilot-ship of the decoy freighter. The girl's drawing the black ball had blocked that scheme, but Reese hadn't given up. Mace remembered with sickening clarity how Reese had argued with the girl to let him take the job of piloting the decoy ship. Argued, almost desperately, to get control of the vital load of U-235.

Mace remembered the look in Reese's eyes as he stared at the girl

when leaving—and he knew that Reese was not through yet.

The space freighter of U-235, with the girl at the controls, was far into the void by now, far ahead of the regular convoy but, Mace knew that Reese, with the second fastest ship in the convoy would be trailing her as relentlessly as a hungry shark.

What chance would the girl have against Reese? Reese was one of the deadliest space fighters that the void had ever produced, as cold and cunning as a snake. And Mace knew that Reese wouldn't bat an eyelid at blasting the freighter into a cinder if it would keep the vital supplies from reaching the men on the Belt.

A BITTER raging anger swelled up inside Mace. He left Reese's room and strode across the field to the mooring tower that encased the emergency space fighter. His great hands were clenching and unclenching with savage anticipation.

He snapped orders to a mechanic.

"Prepare this ship for an immediate blast-off. Check everything. Especially the firing panels and guns. Snap into it!"

The mechanic took one startled look at Mace's grim face and nodded rapidly.

"Yes, sir. Right away, sir."

Mace charged into his office and emerged a few moments later wearing a bulky space suit and carrying his space helmet in one big hand.

The mechanic said, "Your ship's all set, sir."

Mace nodded to the man and sprang up to the mooring tower and clambered into the ship. In the forward control room he slapped shut the automatic locks that hermetically sealed the opening in the belly of the ship.

Quickly he checked the controls. Everything was set. He flashed a signal to the mooring tower and shoved the firing lever into place. The next instant, as the rear propulsion rockets roared into action, the ship blasted out of the tower and streaked into the void. . . .

Forty minutes later Mace sighted the rear ships of the convoy in his front visi-screen. They appeared only as specks of black against white, but they grew larger with each minute. He counted them carefully. Three ships. That left two unaccounted for. That meant the girl and Reese had outdistanced the rest of the convoy.

Mace swore and stepped up his speed to the last notch. The roar of the rockets rose to a throbbing blast and the slim, bullet-like ship spurted ahead under the sudden burst of power.

In five minutes his flashing speed had brought him within space wireless range of the convoy. He plugged in his equipment.

"McAllister calling," he snapped into the transmitter. "Where is Reese?"

An instant later a pilot's voice droned back, "Convoy ship 2 calling. Reese followed ship 1 into Lane 7. Intended to provide a fighter escort if necessary for freighter carrying U-235."

Mace cut off the space wireless with a vicious snap. The girl had blasted into the Lane 7 and Reese was right alongside of her. At any moment he could burn her ship out of the void with one blast of his guns.

MACE was abreast of the convoy now, and in a few moments they were falling behind him, vanishing into invisibility on the rear visi-screen. Ahead of him stretched the Lane that the convoys followed to the Asteroid Belt—Lane 7. But his forward visi-screens were blank. Reese and the

girl were a long way ahead of him.

Mace flashed along for another hour, watching carefully for the blood-red enemy ships. His worried eyes were glued to the visi-screens, but nothing came into their range.

Suddenly he strained forward. For a second he had seen a slim streaking object disappearing out of the lateral range of the front visi-screen. The ship—if it had been a ship—must have been leaving Lane 7, blasting off the known pathway into the trackless maze of the void.

Mace ran a worried hand through his hair. He closed his eyes for a second and then opened them and studied the screen again. It was completely blank. His eyes were burning with the strain of his intent scrutiny of the visi-screen. He cursed helplessly. He couldn't be sure that he had seen anything on the screen. Years of facing the blinding glare of burning suns had taken their toll from his eyes.

For minutes he studied the screen but he saw nothing else. When he reached the approximate location where he had seen the ship he hesitated a moment, checking the speed of the ship slightly. If he left the Lane on a wild-goose chase into the void, he'd never catch Reese and the girl. That was the chance he'd have to take. With a prayer in his heart he picked up speed, banked the ship sharply to the left and rocketed from Lane 7 into the uncharted void.

He continued on a dead-ahead course for several minutes, then he began sweeping back and forth in wide circles to cover as much territory as possible. The visi-screen remained blank.

An hour later his jaw was clamped grimly. Worried lines furrowed his brow. He was thousands of miles from the lane now, thousands of miles deep in the fathomless maze of outer space. And he had seen nothing yet!

A helpless feeling of despair swept over him. His chances were one in millions of stumbling on the ship he'd seen leaving Lane 7.

The most maddening fact was that he couldn't be sure he *had* seen a ship in the first place. It might have been an illusion caused by his weak, strained eyes.

HE SEARCHED the blank visi-screens with almost a desperate urgency. There were no evidences of space craft, but he leaned forward suddenly as he saw the vague shape of a tiny asteroid coming into range. The thing that caught his attention was not the existence of the asteroid—he'd seen dozens since he'd left the Lane—but rather the filmly edge of the asteroid that indicated the presence of an atmosphere.

Mace's pulses pounded excitedly. This was the only spot he'd seen so far that was potentially capable of supporting human life.

He swung the nose of the ship around and cut his rocket power. In a sweeping arc he hurtled toward the slowly rotating asteroid, watching tensely as the tiny globe of matter grew larger and larger in the visi-screen plates.

When he flashed into the asteroid's atmosphere he could hear the shrieking whistle of its friction against the metal sides of his ship. He levelled out and switched in both forward repulsion rockets as the ground of the asteroid rose up to meet him. Braked, the ship bucked like a reined horse, then continued on at a moderate speed.

Mace saw the rocky, craggy surface of the asteroid through the *duraglass* observation window under his feet. There was no sign of life visible on the hostile, barren earth of the asteroid, but as he pulled the ship out of its dive

and zoomed upward, he saw a sight that sent a fierce exultation pounding through his veins.

Two space ships were moored side by side next to a small cluster of buildings on the asteroid. And Mace recognized both of those ships. One was the freighter the girl had set out for the Belt with; the other was the slim fighter Reese had piloted!

The panoramic scene flashed into his vision and was gone even more rapidly as his ship blasted up and out of the asteroid's atmosphere.

An exultant satisfaction was drumming in his body as he swung the ship about in a tight loop and dove back toward the asteroid. His fingers tightened over the levers that controlled the ship's deadly atomic cannons. He fired a trial blast as he rocketed downward. A savage delight gripped him as he saw the long white beams of atomic force strike out from the nose of the ship and cleave smoking passages through the asteroid's atmosphere.

WHEN he levelled from his screaming dive he saw that Reese's slim fighter was ready for flight. And as he blasted again into space he heard a throbbing detonation from the asteroid. And he knew that Reese had heard him, seen him, and was void-bound to meet him.

Mace shoved the tangled mass of hair from his eyes with a suddenly nervous hand. Everything depended on the outcome of this engagement in space. Five years ago he would have welcomed the battle eagerly. But he knew now that his eyes and his hands were lacking the certainty of half a decade ago. He wasn't afraid for himself. But the life of Dale Mason and the lives of the gallantly battling men on the Belt were in his hands, along with his own. And Reese was one of the most savage and coldly vicious space fighters that the void had ever produced.

Mace swung the ship about and circled the asteroid and, as he did, he saw Reese's slim fighter slash through the atmosphere into the void, a trail of bright sparks dropping from its rocket exhausts.

Reese's ship climbed above him and Mace circled warily, tensely awaiting the diving attack that was sure to come. In the visi-screen above his head he saw Reese's ship wheel in a tight bank and drop toward him, gaining speed with every second. This was it!

Mace waited until the last possible minute, then he gunned his ship furiously and shot under Reese's drive. Long blasting bolts of atomic force speared at him from the nose of Reese's ship almost scoring direct hits on his rear rockets. Mace zoomed desperately away from the lance-like blasts. He shook his head in helpless anger. He had almost delayed too long that time. His eyes, his weakened, uncertain eyes, had almost betrayed him. He had completely misjudged the speed of Reese's ship in that maneuver. And, in the void, a man is allowed only one or two mistakes in misjudgment.

Reese was circling, pulling out of his dive in a fast tight loop and heading back now, aiming for an attack on the tail of Mace's ship.

MACE escaped by a quick bank that threw him unexpectedly on the offensive. His fingers tightened convulsively on the firing control levers. Reese's ship was directly in his fore visi-screen as the long thundering bolts of atomic power shot out from the nose of Mace's ship.

But both shots were wide. And before Mace could fire again Reese's ship had slipped from range. Mace swore

helplessly. That had been his chance. But he had muffed it completely.

Reese was back again, cannons thundering a dirge of death. Mace squirmed out of range and ran for it; there was nothing else he could do. Reese fought with a cold, diabolical ruthlessness that was unnerving. Mace twisted, saw Reese's ship creeping inexorably on him in the rear screen.

For another ten seconds Mace fled desperately; then something within him rebelled. His jaw tightened grimly. With an almost savage gesture he swung the ship about in a straining bank and headed back for Reese.

The two ships rushed toward each other like meteors.

Mace bared his teeth in a vicious grin and closed his fists over the firing controls. He was too old to start running from trouble. This might be his last flight but he would go out facing the enemy, and not with a shot in his back.

He gunned the ship for more speed, even cutting in the emergency rockets. The ship leaped forward like a slim piece of flashing quicksilver. The distance between the onrushing ships narrowed with breath-taking suddenness.

Mace could see the nose of Reese's ship rushing at him in the visi-screen. They were only seconds away.

Mace gritted his jaw and closed his hands on the firing control. The long lances of atomic power blasted from the nose of his ship with incredible speed.

He was almost on top of Reese now. With a savage snarl he jammed the firing lever into place and braced himself for the blinding, shattering, inevitable collision.

The nose of Reese's ship rushed at him, and then, at the last fractional instant, it turned aside—and Mace's deadly, blasting cannons raked the ship from nose to tail, transforming it in one second to a blazing mass of disintegrating matter.

Mace swung his ship around carefully and watched the flashing cinders drifting where once had flashed a trim, beautiful ship.

He wiped his damp forehead with a trembling hand. Reese had faltered in that last collision drive and his maneuver had brought his ship into the blasting range of his cannons.

Mace headed for the asteroid. He felt weak and shaken. It hadn't been skill or ability or cunning that had saved his life and all he was fighting for. Those things had deserted him long ago. He had been saved by the one thing that never deserts a man. He had been saved by sheer guts.

He lowered the nose of the ship into the asteroid's atmosphere—wondering what he would find. . . .

HE MOORED the ship and crawled through the sliding door in its belly and dropped to the flaky soil of the asteroid. His hand closed tightly on the electric gun at his belt as he crouched under the shadow of his ship, listening.

Drawing the gun, he cat-footed along the side of one of the metal buildings. He turned the corner and collided with a space-suited figure.

The figure stumbled against him.

"Oh, Mace, I knew you'd get here," a muffled voice sobbed against his chest.

Mace took the girl by the shoulders.

"Don't cry," he said. "I came as soon as I learned about Reese."

The girl's lustrously dark hair was blown in disarray about her damp cheeks. Her wrists were bound behind her.

Mace untied her quickly.

"Anyone else around here?" he asked.

"No. This was evidently Reese's meeting place with the enemy."

"Is the U-235 safe?" Mace demanded.

"Yes. It's still in the freighter. Reese threatened to shoot me down if I didn't follow him here. I couldn't think of anything else to do."

"You did just right," Mace said.

"We had just arrived when we heard your ship. Then you flashed over our heads and Reese, after tying me, went up to meet you."

"We can't waste any more time talking," Mace said. "We have to get the U-235 to the Belt. You fly the freighter and I'll follow you. I've still got plenty of ammunition left in case you run into trouble."

THE girl chafed her wrists to restore the circulation. "All right," she said. She turned slightly from him and her eyes dropped to the ground. "I want to apologize," she said miserably, "for what I said the night I arrived. What a small, rotten little person you must have thought I was."

Mace smiled faintly.

"That's right," he said mildly.

The girl turned and faced him, eyes blazing. She stamped her foot angrily. "You don't have to make it harder for me," she said. "It's bad enough as it is. You're so cold, so emotionless—"

Mace continued to smile. He put his hands gently on the girl's shoulders.

"If I seem that way," he said, "it's only because I'm thinking more of the job than of the people doing it. Maybe I'm funny, but I think the job is more important than the people. But when the job's over I can be quite a different person."

"When is the job going to be over?" Gail demanded.

"This job," Mace said, grinning crookedly, "will be over when we deliver the U-235 and get back to the home planetoid. After that," he said, looking deeply into her eyes, "you won't have any complaints about the coldness of my attitude."

"Is that a promise?" the girl said, a little breathlessly.

"What do you think?" Mace said.

He took her arm then and they strode toward the space ships, smiling at each other.

THE END.

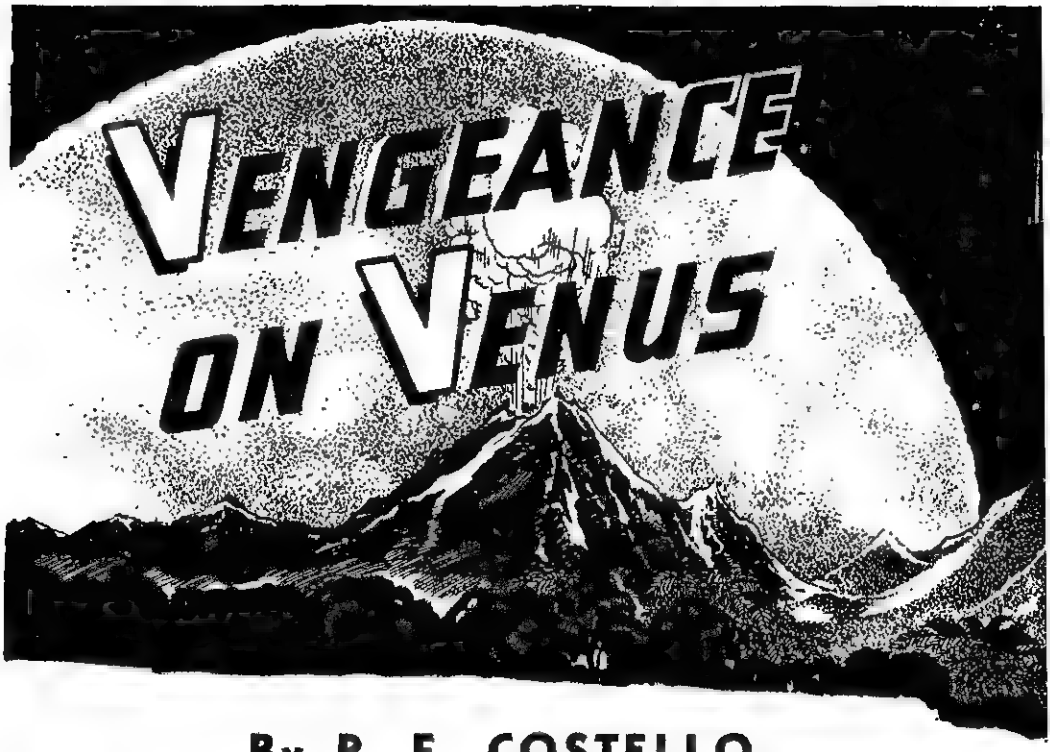
« THE FIRST SLOT MACHINE »

By PAIGE WHITNEY

THE first slot machines ever to be used were owned by the Egyptian priests and used to dispense holy water to Egyptian worshippers upon entering the temples.

The device was really a very ingenious invention that operated very simply. A vessel of the holy water was encased in a box with a slit on the top. The vessel was so formed that the bottom tapered to a small hole that was closed up by a plug fixed to the lower end of a perpendicular rod. The upper end of the rod was attached to a horizontal beam one side of which was formed into a container used to catch the money inserted in the slot. When no money was in the container the weight of the rod kept the plug in the bottom of the water vessel allowing no liquid to flow. If, however, the worshipper would insert his coins, the container side of the beam would lower this pulling the plug out of the water vessel and a small quantity of holy water would pour into a receptacle. Only the proper amount would be given out as the coins, after they had weighed down the beam, would slide off onto the money pile that was being accumulated. Just as soon as the money slid off, the beam would return to its horizontal position thus plugging up the hole once more.

This machine proved quite a source of income for the priests and expenses were at a minimum since the machine did away with the cost of an attendant who was formerly employed to sell the holy water. If the priests were plagued with slugs, there is no record to prove it, but one can imagine that even in the days of the Pharaoh, there were some wise guys who wanted to get something for nothing even though it was only well water made "holy" by the priests.



By P. F. COSTELLO

DARKNESS was settling swiftly as Lieutenant Blake Richardson strode across Panetoid 7's flaky surface toward the towering height of the Penal Administration Building.

When he reached the portals of the building he paused and glanced up at the fog-enshrouded planet of Venus, only a few thousand miles away.

Against the jet black of the void Venus was a globe of lambent blue beauty, and the last rays of the dropping sun tinged its mists with a brilliant flaming halo.

Lieutenant Richardson was not impressed by the planet's beauty. His eyes were hard and cold and thoughtful, and when he turned and entered the Administration Building, there was a determined angle to his jaw.

An *elatube* flashed him up to the top of the building where the offices of his chief, Commander Evans, were located.

Commander Evans turned from the window as Blake entered and closed the door behind him.

"Sit down, Blake," he said. "What was it you wanted to see me about?"

"Something rather serious, sir," Blake answered. He remained standing. His tall, well-muscled body was taut and strained. There was a restrained anger in his lean face and in his cold gray eyes.

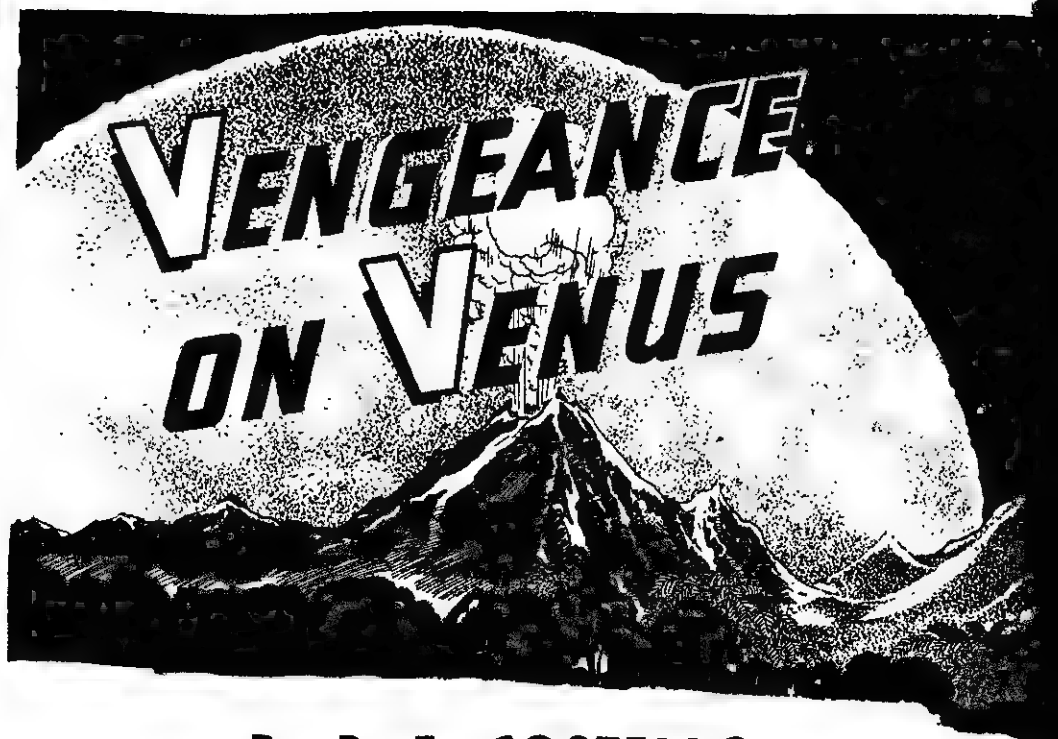
Commander Evans sat down at his desk and looked thoughtfully at Blake Richardson.

"You seem upset," he said drily. "Suppose you tell me what's on your mind."

Blake ran a hand through his kinky hair in a gesture of helpless disgust.

Richardson lashed out with his fist

There was only one way to find out how these prisoners were escaping from the Venus penal colony—go there as an actual convicted man!



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There was only one way to find out how these prisoners were escaping from the Venus penal colony—go there as an actual convicted man!

"I'm certain, sir," he said in a hard-clipped voice, "that the prisoners we send to Venus are being released and given their liberty. I'm convinced that a deliberate and systematic organization has worked out a plan to take these prisoners from Venus and ship them to other planets in the Universe. Whoever or whatever this organization is, I'm sure it's working in collusion with the prison authorities on Venus."

Commander Evans hunched forward in his chair and his square face was set in hard lines. His ice-blue eyes snapped.

"Can you prove these statements?" he demanded.

Blake shook his head bitterly.

Commander Evans settled back in his chair and a faint rare grin touched his mouth.

"You may not be able to," he said, "but," he paused an instant and looked steadily at Blake, "I think I can!"

BLAKE wasn't sure for a moment that he heard correctly. He stared incredulously at his commander.

"Then," he said slowly, "you know—"

"Not everything," Commander Evans said. He leaned forward, his hard eyes boring into Blake's.

"I've been suspicious for several months," he said. "I haven't said or done a thing because it might ruin our chances. I've been waiting for definite proof. I don't have it yet, but I will, you can damn well bet on that."

Blake drew a relieved breath.

"This makes things a lot easier, sir. I was afraid I'd have the job of convincing you that my suspicions weren't groundless. But, as usual, you're several jumps ahead of me."

Commander Evans smiled faintly.

"That's my job, Blake. Tell me, just what have you found out?"

"When I took the last load of Earth prisoners to Venus," Blake said, "I asked Macy, the super, to let me see one of the men I'd brought up on a previous trip. Macy said it was impossible. When I asked him why, he told me that the man had died. That seemed odd because this particular prisoner had been in perfect health when I delivered him a month before. So I did a little snooping through the records and I discovered that quite a few important, wealthy prisoners had 'died' in the past six months. That started me thinking. I checked the prison crematory then, and I discovered that more men had 'died' than had been cremated."

"Did you say anything to Macy about that?" Commander Evans asked.

"Not a thing."

"Good. That might have put him on his guard. It's obvious that something phony is going on there. Just how it's being done, I couldn't say."

The commander stood up and nervously paced the floor.

"We've got to stop this thing," he said harshly. "It means that all the work being done on Earth, and all our work is completely useless, if prisoners can escape from Venus after we put them there. But the only way we can get the information we need is from the inside."

HE STOPPED and looked sharply at Blake, then he shook his head.

"No," he muttered, half to himself, "The danger—"

"Please, sir," Blake said, "I believe I know what you were thinking. The same idea has occurred to me." He leaned forward and gripped the edge of the desk with his hands and his face was flushed with excitement. "Send me to Venus as an Earth prisoner. It's the only way we can find out what we must know!"

Commander Evans frowned.

"I don't like it," he growled. "It's putting you on a mighty hot spot. I won't be able to help you. You'll be absolutely on your own."

"That's just why it might work," Blake said. "If Macy thought I was being sent there to spy on him I'd never learn a thing."

"We'll have to fake a case against you," Commander Evans said, "and sentence you to a regular life sentence on Venus. Your commission will be officially revoked. But," he smiled faintly, "I will personally guarantee that when that commission is reissued you'll be wearing an additional stripe on your sleeves."

"If I can do the job, that'll be reward enough," Blake said.

"Your first job will be to determine what kind of bribe the prisoners use on the prison officials. I'd imagine that regular solar cash would be the most logical." Commander Evans drummed thoughtfully on the top of his desk with his blunt fingers. "Here is what I'll do. After you've been there several weeks I'll arrange to send you a parcel containing marked solar bills. If you can bribe your way out, we'll have the complete information on how it's done, right down to the last detail."

Blake nodded.

"When can I leave, sir?"

"Almost immediately," Commander Evans said. "There is just the unpleasant necessity of your trial and conviction to get out of the way. That shouldn't take long. And I'll attach a complete explanation of this entire situation to the court reports. Then if anything should happen to me there won't be any misunderstanding about your status."

Blake grinned faintly.

"Thanks. That'll make me feel a little easier about sticking my head into the lion's mouth."

"THIS is a very dangerous thing you're attempting," Commander Evans said soberly. "If the officials on Venus discovered why you were there, you wouldn't have a chance to get out alive. But, dangerous as it is, it's the only way we can possibly get the information we need. The entire Penal Administration system will become a joke if we can't stop the leak of men from Venus. If anybody with the means can buy his way out of there, all that we've been fighting for will be lost."

The commander ran his hand wearily across his eyes. His shoulders seemed to be bearing a tremendous invisible weight.

Blake looked at the older man with concern.

"It's none of my business, sir," he said, "but don't you think you ought to ease up a bit? You've been driving yourself like an engine for the past six months. You can't possibly last at the rate you're going. You've worked 'till midnight almost every night. And those long hops to Jupiter and Saturn you take every week by yourself are enough to wear out any man."

"I know, I know," Commander Evans said wryly, "but we've been short of pilots lately. And I'd rather take the controls myself, than to add another burden to our regular pilots. It's a situation that can't be helped, Blake. Everyone's got to make sacrifices and I don't consider myself an exception to that rule."

"I see, sir," Blake said. He realized that nothing he could say would make his chief slow down his almost suicidal pace. It was that fact that made Commander Evans one of the most universally respected and admired officers in Penal Administration.

He stood up and stepped around his desk.

"Don't worry about me, son," he said. "You've got enough to worry about yourself." He extended his hand. "Good luck."

That was all the commander said, but Blake could sense the emotion that was concealed by the simple, almost brusque words.

"Thank you, sir," he said.

The two men shook hands warmly and then Blake turned and strode from the room.

CHAPTER II

Venus!

ONE month later a black prison ship eased through the damp misty atmosphere of Venus and set its blunt nose into a mooring tower constructed within sight of the massive gray walls of the Venusian prison.

An air clamp hissed faintly and two side doors of the hermetically sealed ship slid back. The ship was moored alongside a metal ramp, on which two men stood waiting.

"All right," one of them yelled. "Come on outa there."

Blake Richardson opened his eyes and looked around. The three prisoners to whom he was shackled were still asleep, sprawled tiredly on the floor. Blake glanced down at his rough gray work clothes and ran a hand over his shaven head. He saw the open doors of the ship and the heavy gray murk which drifted in from the outside. There was no doubt that they had arrived at Venus. He yawned and shook the man beside him.

"This is it, boys," he said.

A man stepped into the ship. He was heavily built, with brutal jaws and hot dark eyes. He carried a doubled whip in one big hand. His eyes raked over the four men on the floor.

"Didn't you gentlemen hear me?" he asked softly. His voice had a dangerous purr. "I told you to get outa here. Are you waiting for engraved invitations?"

The man beside Blake, a tough bitten, dark haired little man, looked up insolently.

"We ain't in no hurry," he said. "We got all the time in the world."

The man with the whip stepped forward. His lips were flattened over his big white teeth in an animal snarl. There was a gleam of sadistic anticipation in his close-set eyes.

"Damn you," he said softly.

His right arm rose and fell. The whip cracked like a pistol shot. Its lashing tip slashed across the face of the man who had spoken, opening it from eyes to jaw.

The man shrieked and fell forward, his hands tearing at the fiery agony in his eyes.

"All right, gentlemen," the guard said, doubling the whip in his hands. "Get outa here. I hope the rest of you aren't as gabby as him."

BLAKE climbed to his feet, wooden faced. The man with the slashed face got to one knee and then painfully straightened up. The four men filed slowly out of the ship onto the metal ramp, where another guard waited for them, impassive and hard-eyed.

The four prisoners were fastened together by a chain that was fastened to individual leg irons. The guards inspected their irons carefully.

Blake glanced about at the bleak landscape. The prison buildings, gray and chilling, were the only structures to break the desolate monotony of the Venusian planet.

The murky atmosphere of the planet condensed continually showering the planet with a gray misty rain; the vegetation was composed chiefly of spongy, slimy fungus that covered the surface of the planet like a damp mold.

Blake shivered involuntarily. The penetrating dampness of the air seemed to bite into his very bones.

The heavy, brutal jawed guard who had wielded the whip so viciously walked over to Blake and surveyed him from head to foot.

"You Blake Richardson?" he demanded.

"That's right," Blake said.

The guard inspected him for a moment and then his lips curled in a sneer.

"You sent a lot of men here, in your time, didn't you?"

"I suppose so," Blake said.

"Well your days as a bloodhound are over," the guard jeered. "From now on you take the orders instead of giving them. Is that clear?"

"Perfectly," Blake said.

The guard scowled at him for an instant, apparently nonplussed by Blake's civil answer.

Blake smiled to himself. He didn't intend to give anyone the opportunity to use a whip on him. Not for a while. . . .

The guard bent suddenly and unfastened the chain that coupled Blake to the convict in front of him.

"Come with me," he ordered. "The super wants to see you."

Blake stepped out of line and followed the guard down the concrete ramp. The leg irons only allowed him a step of about eight inches, but as he shuffled along, a grim smile touched his lips. He wasn't in any particular hurry. Not yet. . . .

THE guard stopped before a solid steel door in the interior of the prison. He knocked once and a thin, high-pitched voice answered impatiently, "Come in."

The guard opened the door and stepped into the room, motioning Blake to follow him.

"This is the fellow you wanted to see," he said to a small man sitting behind a bare desk. "I brought him along as soon as he got here, Macy."

The man behind the desk looked up and smiled. He was slight and thin and his eyes blinked rapidly. His thinning straight hair stood up almost straight from his pink scalp.

This was Macy, super of Venusian prisons.

He rubbed his blue-veined hands together and beamed at Blake.

"Nice to have you, Richardson. So seldom we receive such distinguished—eh—guests."

"Thanks," Blake said drily. "Now you can cut out the mularkey, Macy. You've always hated my guts and now you have me just where you want me. So we needn't bother being polite."

There was a subtle change in Macy's face. The softness around his lips hardened and his eyes narrowed into cold slits. Everything about him seemed suddenly to freeze into hard, edged lines.

"No," he said, and his voice was husky with constrained emotion, "we don't need to be polite, Richardson. When I read of your trial and conviction I was the happiest man in the Universe. The brilliant Lieutenant Richardson sentenced to my prison for seditious activities! No, we needn't be polite any longer."

Macy stood up, flushed, eyes gleaming.

"I am your master now, Richardson," he said, in a voice so low that the words were only a whisper. "As you value your hide, don't give me the op-

portunity to use my authority. It wouldn't be pleasant—for you."

Blake couldn't resist a mocking grin.

"Nice, progressive place you run here," he said with bitter irony. "I suppose you have all the most advanced implements. Rack, thumbscrews, flogging posts—"

"Stop," Macy said quietly. There was a deadly undercurrent of venom in his voice that was as chilling as death. "I don't appreciate your levity."

"Shall I teach him a lesson?"

The brutal-jawed guard, standing to the left and slightly behind Blake, asked the question. He moved closer as he spoke, flexing the heavy hide whip in his hands.

"No," Macy said tonelessly. "Take him to his cell. Your chance will come later, Mortain."

"Come on," the guard addressed as Mortain snapped. He grabbed Blake by the shoulder and shoved him toward the open door.

Blake's eyes narrowed and his eyes were like chips of blue ice, but no word passed his tightly locked jaws.

"I shall make it a point to see you often," Macy said softly.

Blake looked at the man for a full instant, then he shuffled from the room. Mortain followed him.

CHAPTER III

Prison

MORTAIN led Blake through the cheerless gray corridors of the Venusian prison, until he reached a cell whose door was standing open.

"This is your palace from now on," he said mockingly. "The last guy we put in here died in two weeks. I hope you're tougher than that."

Blake looked at the man steadily. "You can count on me lasting longer than that," he said, and his voice was like thin ice breaking.

Mortain's lips twisted in an ugly grin.

"I hope so," he said softly. "Now, get in."

Blake stepped into the black doorway, and Mortain shoved him, suddenly, viciously, from behind. He staggered forward and fell to the hard stone floor. He heard Mortain's mocking laugh, then the heavy iron clang of the door.

Blake crawled slowly to his feet and fought down the black anger that burned in his whole body like some ravaging disease. He stumbled over to the wall and explored with his hands until he found a lumpy narrow cot. Stretching out he tried to relax and calm his thoughts.

Above his head was a narrow, barred window, through which the steamy, damp atmosphere of Venus streamed into the cell. The air was cold and damp.

Blake pulled his coarse jacket closer about his neck. He wondered when the money from Commander Evans would arrive. Until it did he could do nothing but wait.

The next morning Blake was introduced to Venusian prison routine. With a group of eight he was led from the prison stockade into the lush swampy areas that surrounded the prison. They were equipped with heavy axes and the apparent purpose of their work was to clear the spongy water-soaked vegetation from the soggy soil.

Why, Blake couldn't guess. The labor was pointless and unproductive, but it was something to do. Standing ankle deep in scummy green water, Blake hacked at the fibrous plant life in grim silence. And he watched the actions of the guards and prisoners carefully.

At darkness they were returned to their cells. Blake stood with his blistered hands gripping the bars of his window, staring bleakly out over the steaming, humid land, wondering. . . .

A MONTH passed. A month in which Blake grew thin and ragged and desperate. He was soul-sick of the brutality of the guards, the bleak horror of the existence, the terrible punishments meted out to the convicts for the least infraction of the rules.

But he had learned nothing. He hadn't seen Macy since the day he'd arrived.

One night, six weeks after his arrival on the sweltering prison planet, Mortain stopped at the door of his cell.

"On your feet," he growled. "You've got a visitor."

Blake felt his heart hammering with excitement. He stood up and shoved his unkempt, mud-caked hair from his eyes, as the cell door swung open. A shaft of light fell onto the cell floor. Mortain stepped aside and a figure filled the doorway.

"Hello, Richardson," the man in the doorway said.

Blake's hands tightened convulsively at the sound of that familiar voice.

"Commander Evans!" he breathed.

The commander stepped into the cell and Mortain followed him, whip in hand.

"We've got to watch him, Commander," Mortain said. "He's a bad one." Blake now had a look at his chief's face, as the corridor light flooded the cell. It was impassive and stern.

"You may wait outside," the commander said to Mortain. "I'll call if I need you."

"All right, sir," Mortain said. He looked dubiously at Blake, then turned and left the cell.

The commander glanced after him, then turned quickly to Blake. His face was still expressionless, but there was an urgent gleam in his eyes.

He said loudly, "You got just what you deserved, Richardson. Don't expect any sympathy from me." But his hand dug into the front of his tunic and he shoved a slim packet into Blake's hands.

Dazedly, Blake fingered the package, and then as realization came, he hurriedly stuffed it into the front of his shirt. Relief flooded over him in a reviving wave.

"Thank—"

"I can do nothing for you," the commander said in a harsh tone that completely drowned out Blake's voice.

Without another word he turned and strode from the cell. Blake heard him say something to Mortain, then the cell door clanged and Blake heard their retreating footsteps.

HE WAS left alone in the darkness. After a few moments he took the packet from his shirt front and carefully opened it. His fingers felt crisp slips of paper. Moving to the faint light from the window he saw that the package contained a sheaf of solar notes, redeemable anywhere in the Universe. They added up to an impressive figure.

Blake stood in the darkness of his cell, until he heard Mortain's footsteps coming back down the corridor. He stepped to the narrow slit in the cell door and whistled softly.

Mortain stopped and then walked slowly toward Blake's cell. Blake could see his ugly brutal face in the dim light of the corridor and the cold gleam in his close-set eyes.

"What do you want?" he growled.

"Macy," Blake said shortly.

"You're crazy. Get into your bunk and shut up."

Blake peeled off one of the bills and shoved it through the slit.

"Tell him it's important," he said.

Mortain took the bill and his heavy face clouded with a greedy suspicion. He stared at the note for an instant then shoved it hurriedly into his pocket.

"Where'd you get that?" he demanded.

"Never mind. Do I see Macy, or don't I?"

Mortain hesitated for a moment, his piggish eyes shifting uncertainly. Finally he shrugged.

"I'll tell him," he said.

Blake felt a dizzying relief as Mortain moved away. The first step had been taken. Where it might lead he had no idea.

Fifteen minutes passed and Blake's nerves jumped at every tiny noise. He paced the narrow length of the cell like a caged leopard. His hands opened and closed spasmodically. Finally he heard footsteps in the corridor. He sprang to the door of the cell and peered out the narrow slit.

In the dim illumination of the corridor he saw Macy, the prison super, walking softly in the direction of his cell. There was a faint, enigmatic smile on his face, and his blue eyes were wide and bright. His hands were in his pockets and his thin shoulders were hunched about his neck.

"Well, well," he said softly, as he stopped before Blake's door, "the mountain comes to Mahomet. You should be gratified—eh—Mr. Richardson. What is on your mind?"

BLAKE studied the man carefully. Macy knew he had money, Mortain would tell him that. Therefore, there was nothing to be gained stalling.

"I'm fed up here," he said quietly.

"Most of my prisoners are," Macy smiled.

"Most of your prisoners can't buy their way out," Blake said. "I can."

Macy looked up and down the corridor, pursing his lips.

"Maybe," he said. "Give me the money."

"What assurance do I have that you'll keep the bargain?" Blake demanded.

"None," Macy said. "And you are hardly in a position to bargain."

Blake realized that Macy spoke the truth. His moist fingers tightened on the slim bundle of currency. It was his only weapon. Once gone and he would have nothing, but it was a chance he had to take.

He handed the currency through the slit, and Macy's slim hand closed over it greedily.

"Thank you," he whispered softly. With a mocking smile he turned and slowly walked away.

Blake listened until his footsteps had died away, then he turned away from the door and flung himself on the cot. A fierce exultation was leaping through him. In another twenty-four hours he might have all the proof he'd need.

But he didn't have to wait that long. In the middle of the night he was awakened from a fitful sleep by a furtive tapping on the door. Instantly alert, he stood up quickly, every nerve tingling. The tapping was repeated.

He stepped to the door, his stockinged feet muffling the sound of his steps. Mortain's broad, brutal face was at the narrow aperture.

"What's up?" Blake asked.

"Not so loud. Get dressed, you're leaving."

Blake's fingers trembled with suppressed excitement. He nodded and stepped back to his bunk. It was the work of a moment to slip into his shoes and pull his coarse jerkin over his head. He returned to the door.

"Ready," he whispered.

He heard a key grate in the door's lock, the next second the door opened. Mortain's bulky figure was almost completely covered with an ankle-length oiled coat, and he carried an automatic flare in one hand and an electric pistol in the other.

HE MOTIONED Blake to follow him, then lead the way down the poorly lit corridor. At an intersection he turned at right angles and continued along another corridor until he came to a locked, steel door. This he opened. It led to a winding staircase that led, Blake knew, to the central stockade.

Mortain went down the steps quickly and Blake followed at his heels. At the base of the steps Mortain opened another door and the damp, murky atmosphere of the planet billowed in about them. Mortain stepped through the door into the main stockade, a cleared area, several hundred feet square, surrounded by the prison's electrically charged fences.

Blake followed Mortain across this clearing toward the central gate. There was no furtiveness or hesitation in Mortain's attitude. Blake realized that this was probably not a new procedure for the guard.

When they reached the gate, Mortain signalled to the guard in the tower and the gate swung open. The two men stepped through and it closed behind them immediately. Obviously the tower guards were old hands at this. Blake smiled grimly. When and if he reached Commander Evans again, he'd have dynamite stored up to blow this corrupt administration sky-high.

Mortain removed the metal shield from his flare and it instantly blazed into light, throwing a brilliant illumination yards about them. The flares were composed of a chemical substance that reacted with the aqueous atmosphere and produced a steady, unquenchable flame.

Without speaking Mortain struck out into the swampy depths of Venus. Blake followed, churning knee-deep in the slimy underfooting. The water laden air seemed to press in on him, making breathing difficult. His clothes were soaking wet within a hundred yards and he was covered with muck and slime to his hips, but he didn't mind. He was free and he was on the trail of the information that would smash this rottenly corrupt penal system.

That was all that mattered.

CHAPTER IV

Into the Swamp

FOR two hours they slopped through the swampy ooze of the planet, crashing and stumbling through the fibrous foliage and sinking to their hips in the treacherous bogs and pits. Blake's breath was a sharp pain in his throat and the muscles of his legs ached intolerably.

But eventually Blake sighted a light in the distance. Mortain obviously noticed it too, for he changed his course slightly to head directly for it and he pressed on at even greater speed.

"Is that our destination?" Blake gasped.

Mortain grunted something unintelligible and sloshed on without answering.

In another fifteen minutes they reached the light. It was an automatic flare erected in the center of a small clearing. By its glaring illumination Blake saw a small, crudely built structure and a small space mooring tower.

He studied the scene with dawning realization. This was obviously the

rendezvous where the liberated prisoners met the ships that carried them off to the far points of the Universe.

Mortain stopped in the center of the clearing, breathing heavily. He looked around and then, apparently satisfied, he turned to face Blake.

"What now? Blake asked.

Mortain grinned unpleasantly. There was a sadistic anticipation in his dark, brutal-jawed face, as he very slowly swung the barrel of his gun up to cover Blake.

"This is the end of the line for you," he said harshly.

Blake heard the words with horrible clearness, but it took a full minute for their impact to penetrate.

"Don't try anything foolish," Mortain said softly, "unless you're in a hurry to keep your date with eternity." He lifted his voice. "All right, Macy."

Blake's eyes swung to the door of the small structure as Macy appeared there, his soft features twisted in a gloating smile. He watched in a trance-like daze as Macy stepped through the doorway and walked slowly across the clearing.

"Neatly done, Mortain," he purred.

"Shall I give it to him?" Mortain asked. The barrel of his electric gun was unwaveringly centered on Blake's chest and his finger was trembling with eagerness.

"Don't be impatient," Macy said, with a soft smile. "I'm rather enjoying this little scene. Perhaps Mr. Richardson has something to say before he —eh—leaves us."

BLAKE'S hot gaze swung from Mortain's brutal leering face to Macy's smiling features. A blazing rage was coursing through his body like a red flame.

"Damn you!" he grated.

Macy chuckled gently and rubbed his thin hands together.

"How melodramatic you become in your anger. As a matter of fact I staged this little party just to make your last moments as uncomfortable as possible—eh—Mr. Richardson. I knew there would be little solace in your realizing that we have been aware of your little plan since the day you entered the prison. We have all been vastly amused by your stupid subterfuge. Now it is our regrettable duty to kill you—kill you as you are attempting to make an escape. That, at least, will be the story for the official records. I couldn't resist the opportunity of telling you this much myself. That is why I had Mortain go to the considerable trouble of bringing you out to our transfer station. I am leaving soon on a rather important trip but I wanted to witness your last uncomfortable moments before leaving."

As Macy stopped speaking he nodded briefly to Mortain.

"I think you may proceed," he said. "As long as Mr. Richardson has nothing to add to this little drama we might as well get on with the climax."

Mortain shifted the gun slightly and Blake felt his stomach muscles contract in anticipation of the blasting bolt that was sure to come.

Suddenly Blake heard a sound above his head. Instinctively his eyes raised. In the murky gloom of the atmosphere he saw a small, blunt-nosed space ship drifting down toward the mooring tower.

"Right on time," he heard Macy say.

Blake glanced at Mortain then and saw that the guard had also glanced up at the settling ship—and that the gun in his hand had veered carelessly to one side.

With every atom of his lithe strength Blake sprang—not for Mortain—but to the side toward the blazing flare. He

heard Macy yell and before the echo of the cry had died Mortain's electric gun hissed spitefully. A searing pellet of live fire burned through the sleeve of his jumper, branding the flesh of his arm with excruciating pain.

His hand closed on the shaft of the flare. Jerking it from the ground he rolled to one side as Mortain's gun spat flame again. The pellet missed, but its hot breath fanned his cheek in passing.

Then he was on his feet, out of the line of Mortain's fire. With a savage swing he hurled the blazing flare straight at his face. Mortain screamed and dropped to one knee, but he was not quick enough. The flaming flare grazed his head, knocking him onto his back.

Blake dove onto his threshing figure, grappling for the gun that was clenched in his hands. With a scream of pain and fury Mortain fought to jam the muzzle of the gun against Blake's body, but Blake's hold on his wrist doubled the gun back against his own stomach.

Blake heard Macy's feet scuffling behind him, but before he could move, something crashed into the back of his head with sickening force.

HE FELL forward, blinded with pain, a thousand pinwheels of brilliant lights exploding in his head. His weight pressed against the electric gun beneath him and he dimly heard its sudden sputtering blast.

A scream tore from Mortain's lips and he threshed wildly beneath Blake's sagging weight. Blake rolled to one side and his face fell into a pool of green murky water.

The shock cleared his numbed brain. He rolled painfully to his side and saw Mortain's body grotesquely sprawled on the soggy ground, a hideous scorched hole burned through his middle.

Macy was scrambling in the mud for the gun. Blake climbed to his knees and lunged at him, his right fist chopping down at his jaw in a vicious axe-like stroke.

Macy sprawled to the ground, a hoarse gasp of horror tearing from his throat. His eyes were wild with fear as he scrambled to his feet and started to run.

Blake caught him in three strides. His hand fastened in Macy's coat, jerked him about with a savage wrench.

Macy fell to his knees, slobbering in his fear.

"Please—please—" he gasped.

Blake jerked him to his feet and struck him with all his strength across the jaw. Macy's head snapped back and he fell to the ground in a queer twisted position. A horrible gurgle sounded in his throat; froth flecked his lips; then he was still.

Blake looked down at him and, as the red mist of rage drifted from his brain, he realized that the blow had broken Macy's neck.

He stood there for an instant and he felt no pity or sorrow for the thing that lay sprawled in the slimy muck before him.

The clearing was completely quiet. Blake took a deep breath and glanced around and it was then that he saw that the snub-nosed space ship had moored. A door had opened in its black side but there was no evidence that the ship was occupied.

Blake walked over to where Mortain lay, found the electric gun and stuck it in his belt. He looked grimly at the two bodies sprawled in the clearing and then headed for the mooring tower.

Cautiously, he ascended the iron ladder that led to the boarding ramp.

A quick inspection of the main body of the ship convinced him it was unoccupied. The door leading to the control room was locked. He noticed then

that the automatic *visilights* were glowing from the ceiling and he realized that the controls of the ship were set for a return trip.

But to where?

CHAPTER V

Time for Action

BLAKE had a feeling that he hadn't yet completely uncovered the mystery and corruption on the prison planet. For an instant he stood irresolute in the center of the small cabin, then he made a quick decision. He slammed the cabin door and adjusted the device that hermetically sealed the ship. Almost instantly he heard a faint hum as the rear propulsion rockets throbbed into life. The tiny space craft shuddered as the hymn of power built slowly into a mighty symphony of pulsing sound.

Blake sat down on the only chair in the small cabin and waited. There were no port windows in the body of the ship. He was completely enclosed.

A minute passed and then the nose of the ship tipped from the mooring socket and with a sudden burst of power the tiny space ship blasted upward and outward, void-bound.

For an hour the ship roared through the trackless depths of outer space and Blake was as helpless as a blind man. He hadn't the slightest idea where the ship was taking him. And he couldn't guess. That he was heading for trouble he felt sure, but how and when were unanswerable questions.

An hour later the throbbing roar of the rockets diminished slightly, and a few minutes after Blake noticed that, he felt the jarring impact of the fore repulsion rockets.

The ship was slowing and braking for a stop. Soon he heard a banshee screech as the nose of the ship slashed through heavy atmosphere. Blake knew that the ship was nearing its destination. His hands balled into tight fists and he stood up and faced the cabin door of the ship.

The forward motion of the ship stopped completely and Blake heard a faint scraping sound, as if the side of the craft were brushing a metal wall. He waited, tense, hardly breathing.

The sealing cylinders released with a gasp of pressured air, and the side door of the ship slid back with a clang. Blake stepped forward uncertainly. He was facing a smooth steel surface, but even as he took another step forward, he saw it was sliding back, revealing a short, lighted corridor.

Blake stepped from the ship into the corridor and paused. The corridor was only a narrow passage, hardly six-feet long, leading to another steel door.

With infinite caution he approached this second door. When he was within a foot of its gleaming surface it swung suddenly open, revealing a spacious, luxuriously furnished office.

THERE was a figure seated at the massive desk but his back was to Blake and in the deepening gloom of the office it was impossible to see more than the outlines of his bulky form.

Blake stared at the office and a numb feeling of horror caught at his throat. It couldn't—

"Is that you, Macy?" the figure at the desk asked. He did not turn his head. "Is Richardson out of the way for good?"

The sound of the voice crystallized Blake's half-formed suspicions. Suddenly he seemed to see a complete picture, bits of the puzzle fell into place with magical rapidity and he knew suddenly who was responsible for the corruption on the prison planet Venus.

He drew a slow breath.

"No, it's not Macy," he said softly, "and Richardson is far from being out of the way."

His voice loud in the still quietness of the room. The figure at the desk wheeled and stared at the door in which Blake stood.

"God!" he whispered. His hand touched a light on the desk and the room was bathed in sudden white brilliance from two overhead lights. He stared at Blake's bleeding, mud-grimed, figure as if he were seeing a ghost.

"You've been very clever, Commander Evans," Blake said harshly. He stared at the white-faced figure of his chief and his eyes were like hot pools of blazing fire.

"You've got the wrong idea," Commander Evans said, almost hysterically.

"No I haven't," Blake said quietly. "I've just got the right idea. You were expecting Macy here tonight. That accounts for your night work these past six months. You had to meet Macy for the split, didn't you? I don't know why you bothered to give me the money at the prison. Maybe that was your idea of a joke."

SOME of the color was seeping back into Commander Evans' face.

"It's a good story you've cooked up," he said, "but who do you expect to believe it. It will be my word against yours and as an escaped convict your word isn't worth a damn. Supposing I was running the escape racket on Venus? You can't prove it and you'll only cause trouble for yourself if you try. Now if you're smart I can fix it so you'll do all right for yourself. It's a sweet business and there's room for another clever—"

"Stand up, Evans," Blake said.

A fleeting gleam of panic brushed the officer's eyes. He moistened his lips with his tongue.

"What are you going to do?"

"Kill you," Blake said, without a quaver of emotion in his voice.

"Y—you can't," Evans said hoarsely. He started to rise from his chair. "I'm unarmed. You can't shoot a man in cold blood."

"There's a gun in your desk," Blake said. "Use it."

The commander's voice broke.

"No! I can't. Listen to me. I—"

His voice trailed off as he read his doom in the cold, implacable fury in Blake Richardson's eyes.

With a sudden lunge he jerked open the drawer of his desk and whipped out a gun.

Blake reached for the gun at his belt with icy deliberation.

The commander swung around and the gun in his hand blasted twice. Both shots were wild. The commander fired again, hysterically, and then Blake raised his own gun and shot him twice through the head.

There was no expression on his face as the commander swayed and pitched forward across the desk, arms and legs sprawled grotesquely.

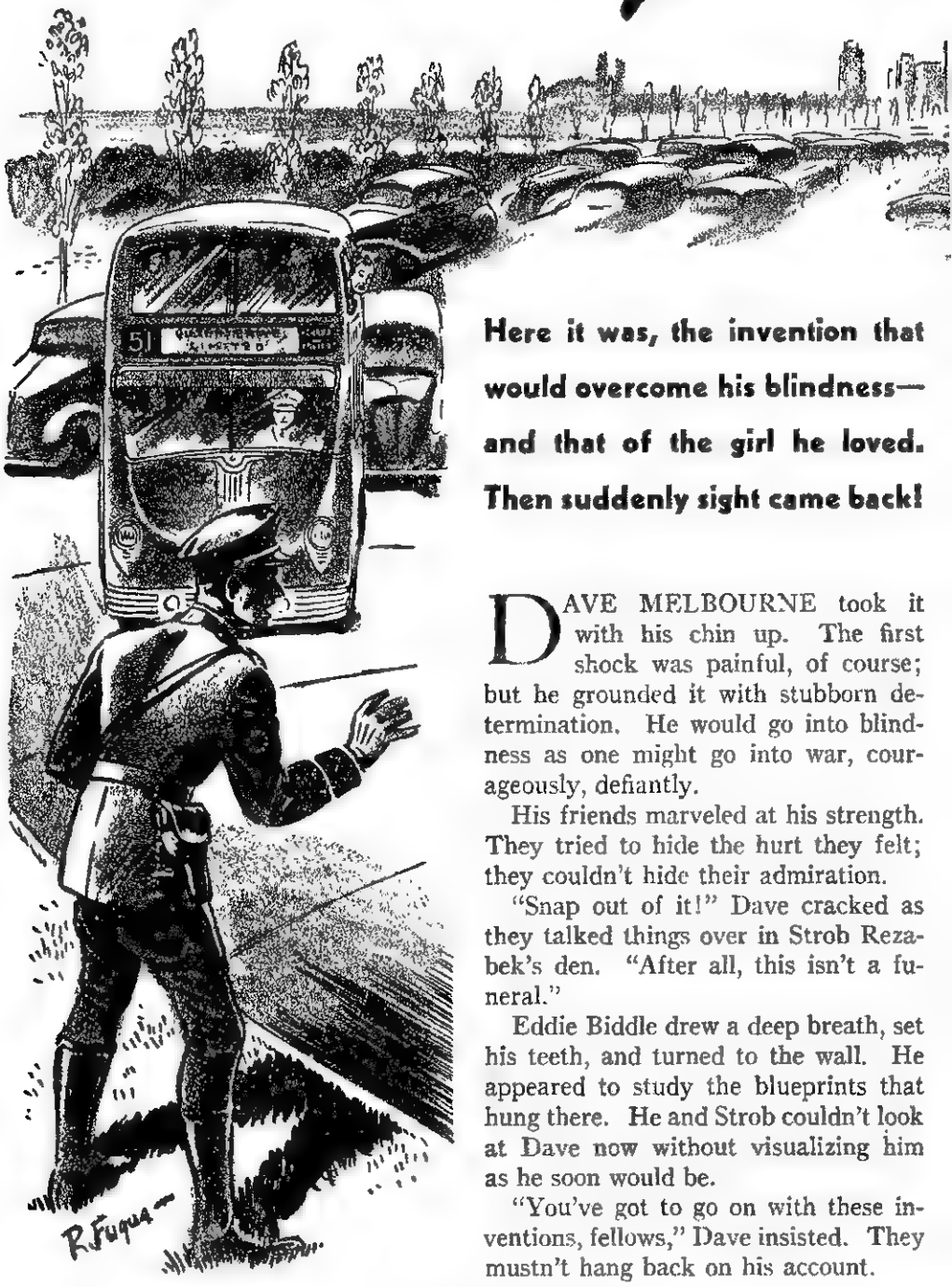
He shoved the gun back into his belt and walked over to the desk. A five minutes search revealed the secret drawer in which the commander had kept a complete record of his nefarious dealings with prison officials on Venus.

When he had flipped through the incriminating sheaf of papers, he picked up the radio phone and flashed HQ on Earth. When the connection was established Blake spoke.

"You'd better send a delegation here." He paused and glanced at the lifeless body of the commander and he thought of Macy and Mortain.

"There's been a little trouble on Venus," he said thoughtfully. Then he replaced the transmitter.

Robotcycle



Here it was, the invention that would overcome his blindness—and that of the girl he loved. Then suddenly sight came back!

DAVE MELBOURNE took it with his chin up. The first shock was painful, of course; but he grounded it with stubborn determination. He would go into blindness as one might go into war, courageously, defiantly.

His friends marveled at his strength. They tried to hide the hurt they felt; they couldn't hide their admiration.

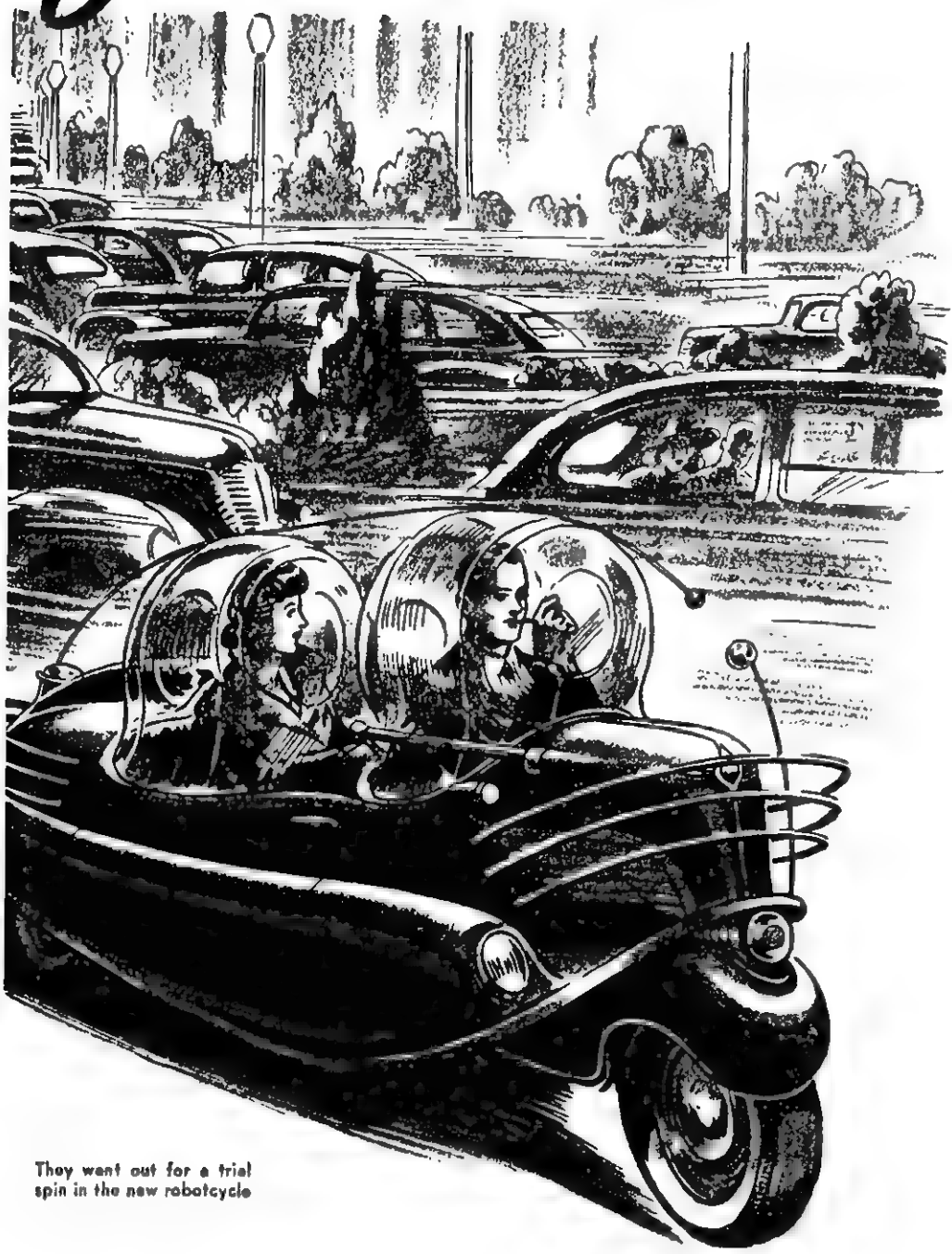
"Snap out of it!" Dave cracked as they talked things over in Strob Rezabek's den. "After all, this isn't a funeral."

Eddie Biddle drew a deep breath, set his teeth, and turned to the wall. He appeared to study the blueprints that hung there. He and Strob couldn't look at Dave now without visualizing him as he soon would be.

"You've got to go on with these inventions, fellows," Dave insisted. They mustn't hang back on his account.

for Two

By MAX OVERTON



They went out for a trial spin in the new robotcycle

Robotcycle for Two

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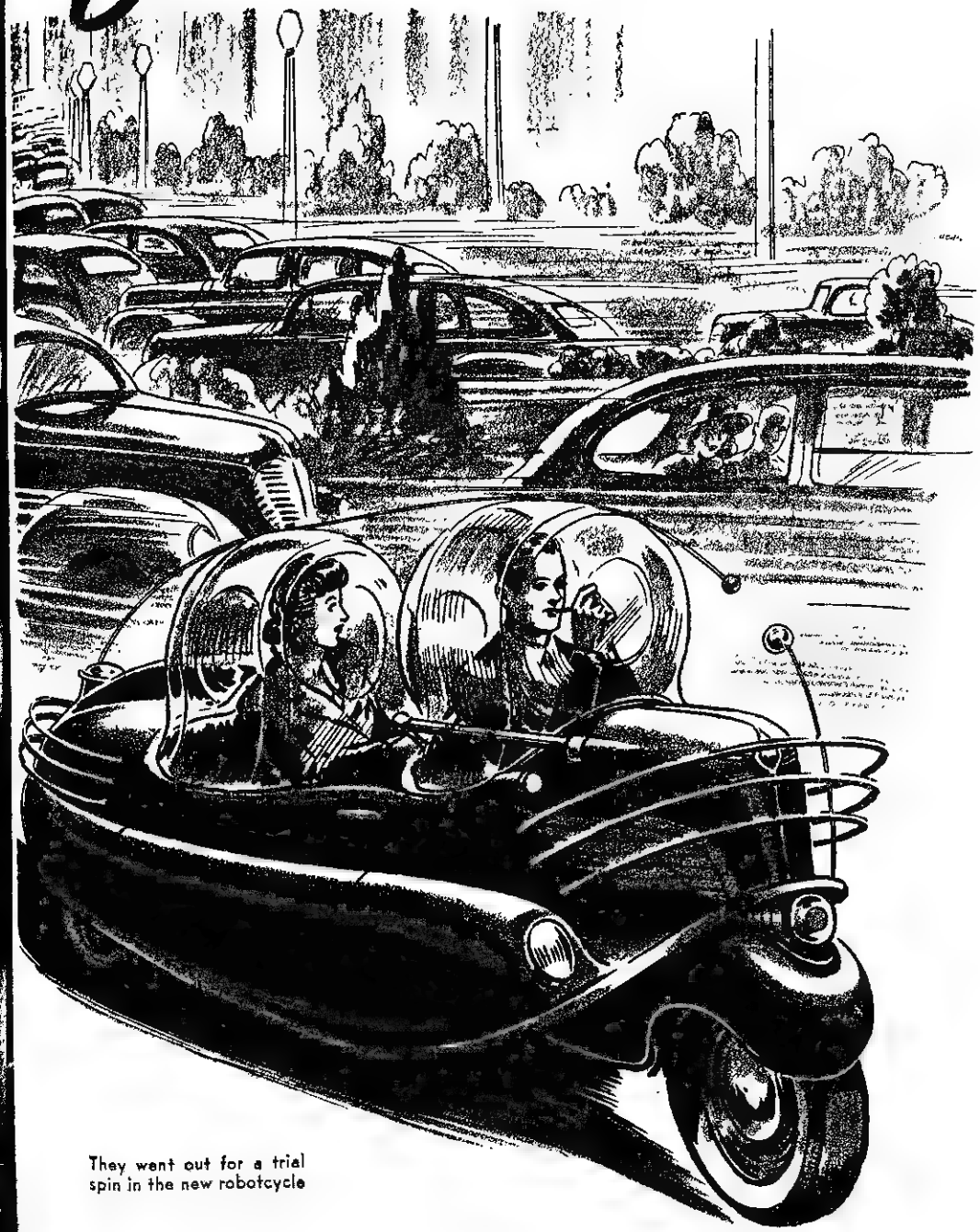

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"It takes three of us," Strob protested. "That's the way we've always worked. We're going to keep on that way."

"After all," said Eddie, "it might have been any of us as well as you, Dave."

David Melbourne knew that was true. He had acquired this rare affliction in the Near East on an expedition for the World-Wide Electric Company. All three of them had gone. There was no rhyme or reason why he and none of the others had become a victim of this singular malady.

But that was beside the point. The doctors were powerless to prevent the tragic course the disease always took. Blindness would come.

"Cheer up, fellows! The world isn't as black as you think! Look!" Dave drew a letter from his pocket. A bank draft with some handsome figures on it tumbled out. Eddie picked it up with a low whistle.

"Wow! Is it real?" It was from President Stratton of the World-Wide Electric Company.

"Pretty decent," Strob grunted. "You sure deserve it, though. After all, you saved the expedition . . ."

They poured over the letter. It carried sympathy and appreciation: "The executives . . . have made up this purse for you. . . . Since you have a few months of sight yet before you, this will enable you to see some more of the world, if you care to do so; or enjoy yourself any way you wish . . ."

"Swell!" Eddie Biddle grinned. "Almost wish I could trade places with you! I'd jump on the next boat to Hawaii. Hula girls! Hotcha!"

"I'd go to Alaska," said Strob, "and Iceland—and then—but gosh! You'll get around to fifty dozen places on that dough! Have you decided where—"

"I'm not going anywhere," said Dave, smiling. "I'm staying here and getting ready."

"Ready?" Eddie was still thinking of Hawaii.

"For what's coming," said Dave. "I prefer to go into blindness with my eyes open." His words brought them back to reality with a thud. "First I want a place to live, built so I can take care of myself. Next, if you fellows still want to go on with the inventions we've planned—"

"Of course we do!"

"Then part of this check goes into a laboratory and shop—for the three of us. I won't promise to do my full third of the work, but I'll do all I can."

THEN Dave turned to the third expenditure on his agenda. He drew a paper from his pocket. The rough sketch he laid before them looked at first glance like a basketball on a roller skate.

"Don't laugh," he said, "but here's the very latest thing in transportation. My own scheme for blind men and absent-minded professors—in other words, a robot wheeled chair to help me around on the streets."

Eddie Biddle's eyes bugged out. The inventive wheels in his head began to whirl. Strob, always on the lookout for flaws, blinked and mumbled, "maybe."

"Think it over," said Dave. "I'm going out south for the day. There's a private institution in one of the suburbs, I've heard, with a few blind inmates. Maybe I can get next to them."

David Melbourne's train clacked along the shore of Lake Michigan. He caught himself memorizing sights here and there. Wild black waves wrought up by the March wind. Swirling smoke from the Illinois Central roundhouses. Sights were precious gems now, even things often called sordid: brilliant bill-

boards, blue-gray apartment houses settling into decay, WPA workers plodding at the earth, brown-roofed factories.

MOTHER RAFFERTY'S HOME.

The dilapidated sign hung over the front portico of the great rambling old mansion.

Dave rang. He waited at the door, listened to the soft music of an old-fashioned organ from within.

The door opened. A small crippled boy said he would go call Miss Yost.

Dave strolled into the reception room. At his footsteps the girl at the organ stopped abruptly, half turned.

"Please don't let me interrupt," Dave said casually.

"Oh!" the girl breathed. "You frightened me. That is, I thought you were Mr. Sleem."

"I'm sorry," said Dave, puzzled by her agitation. Her fingers trembled slightly as they returned to the keys. Then she lost herself in her music.

Here was another picture to remember, Dave thought: a beautiful girl at an old-fashioned organ. A face and figure of rare loveliness. Rather shabbily dressed, but that seemed unimportant. The music surged with feeling.

"I'd better go," said the girl when the number was done. "He won't like it if he finds me practicing."

"Who?" Dave asked, watching the girl's graceful hands brush along the wainscoting as she crossed the room.

"Mr. Sleem," she answered with a hint of fear in her voice. "I'm supposed to finish another basket for him today." There was a slight smile in the girl's half-closed eyes. As she went out of the room it came to Dave with a shock of horror that she was blind.

AT LENGTH a middle-aged matron in a white uniform entered.

"So you wish to talk with some of our blind," she said pleasantly, referring to his letter. Dave explained his reasons. A note of restraint came into the matron's voice. Mother Rafferty's Home was simply a private institution, and she must warn him at the start that Mr. Sleem did not look kindly upon visitors. "But I'll be glad to help you if I can."

The name of Sleem began to have meaning. "Is Mr. Sleem the superintendent?"

"Officially, no. He's the occupational director." And before Miss Yost knew it she had plunged into the troubled history of Mother Rafferty's Home, which meant nothing to Dave. It was no concern of his that Mother Rafferty was bedfast, that Mr. Sleem usurped more and more authority, that Mr. Sleem found it easier to whip the youngsters than reason with them. Then Dave recalled the girl at the organ and his interest leaped.

"Surely he doesn't mistreat the older ones—such as this young lady I saw at the organ?"

Fire showed in the matron's eyes, but that was the only answer Dave got. Miss Yost held her tongue and turned the subject to the story of the young organist. The story was by no means all tragic; a personal enthusiasm for the girl showed in the matron's eyes. For Linda LeFraine was a girl with spirit.

The one source of tragedy was that the girl would never see again. Her optic nerve had been permanently injured in an automobile accident. Her parents had been killed. Some of her relatives were friends of Mother Rafferty. They had sent her here. That was two years ago.

"She's very talented. She's tried so hard to be happy here, but—well, she'll finish her courses and leave in a few months, but heaven knows what she'll do."

Dave took a long breath. A cloud of hopelessness hung black and threatening whenever he dared look at it.

"Must be tough to get work when you're blind. I shouldn't think there'd be much demand for handmade stuff in this age of machines."

Miss Yost flashed a warning look. "Better not say that to Mr. Sleem. Baskets are his long suit. Between baskets and musical programs he's raised his salary and got himself a chauffeur." She blazed with indignation.

The door swung open and a stocky, well-dressed man strode in.

"Here's Mr. Sleem now," said the matron, narrowing an eye at Dave.

The man marched to the desk, a strong air of importance in his bearing. He gave Dave a passing glance through his pince-nez, drew the tight lines about his mouth a little tighter, twisted his narrow mustache a trifle. He picked up the afternoon mail, slid it through his puffy fingers, looked up at Dave again, then at the matron.

"I'll take care of this man," he smacked through his thick lips. "You may go back to work."

The matron went.

"Now, what is it?"

DAVE sauntered toward the desk. He knew by now that Sleem was no man to grant favors. There was no reason why Dave shouldn't walk out of this hotbed as abruptly as he had walked into it. But something held him -perhaps it was sympathy for the beautiful girl who had already entered the world of darkness that awaited him. At any rate he was in no mood to retreat. But how to get his hooks through this man's ice? He wondered.

"I'm David Melbourne," he said. "I'm going blind in a few months. I wrote you –"

"Yes, you wanted advice. We've no free advice to give anyone. We're too busy. If there's nothing further—"

The word "free" gave Dave his cue. He caught the gleam of a diamond stick pin, the flare of a sapphire ring. With these reassurances he struck for Sleem's vital spot.

"Do you teach braille here, Mr. Sleem? I want the best course that money can buy."

Money. A glimmer of interest showed through Sleem's spectacles. The stocky man's lips clicked. "Braille is one of my specialties. However—" he scrutinized Dave with calculated reserve, "I cater to a very select clientele, as my time is limited. . . . All tuitions are payable in advance. I could perhaps accommodate one more student at this time."

Dave arranged his schedule, paid his fees, and left. As he waited for a train back to the city he noticed an advertisement of a local music program "featuring Miss Linda LeFraine, the blind organist.' A lovely picture of her was on the placard. It clung in Dave's mind, and with it the item that read: "All proceeds to go to Mother Rafferty's Home."

CHAPTER II

Braille and Blueprints

"BY GOLLIES, our busiest piece of equipment is the wastebasket," said Eddie Biddle as he dashed three more designs into oblivion, "but before we get done Dave's going to have the handiest house ever built."

"Yeah," Strob grunted as he labored over his drafting table.

"And that robot vehicle. We've got something there. Funny no one's ever got busy on that before."

Strob was skeptical as usual. "It'll

make trouble for him—more than it's worth."

"I dunno. He may hit some snags, but if it works out, every blind man in the country will want one. Think what that will mean for the firm of Melbourne, Rezabek, and Biddle!"

Strob preferred to be pessimistic, but he couldn't help turning the matter over in his mind. "Robotomobiles for the blind, eh?"

"With plenty of electronic mechanisms to guide them and avoid bumps. Dave talked it over with the patent department at the library. They said after all the changes they've seen in recent years, they wouldn't be surprised if something like this would come in."

"It's a sure cinch the electric eye hasn't begun to find its place," Strob declared. "But Dave's scheme for audible indicators—that sounds like trouble to me. By the time he has ten or fifteen tones ringing in his ears at once he won't know whether to throw 'er into high or turn on his siren and cry for help. But that isn't all I'm worried about."

"Yeah?" said Eddie, as if he suspected as much.

"This house we're planning is for one blind occupant."

"What of it?"

"Suppose the contractors get it set up and we get all our automatic equipment in, and Dave suddenly takes a notion to get married?"

Eddie snorted. "Dave wouldn't do that."

"Why not?"

"You heard what he said the other day, didn't you? Blind people have no business getting married. That's what he said."

"Yeah?" Strob threw his pencil down and faced Eddie. "What made him say it?" Eddie offered no answer except wide eyes and a gulp. Strob pursued, "He's said it because it's on his mind. I've got a suspicion it's been on his mind ever since he started taking braille lessons with that blind girl out at Mother Rafferty's Home. Did you know he bought a little radio for her the other day?"

"I wouldn't give it a thought," said Eddie, and for the rest of the afternoon he thought of nothing else.

THE braille class at Mother Rafferty's Home was late getting started that afternoon. The handful of blind students, all younger than Linda and Dave, huddled together in their classroom, clung to their thick braille primers, and chuckled because Mr. Sleem was late.

Mr. Sleem was busy administering discipline to "Dusty," the half-witted boy who couldn't talk. Dusty had smashed the mail box on the front porch. A good thing to do, Dusty thought, for he was a creature of action. There was no accounting for Dusty. Most of the inmates laughed at him, though the blind children often feared him. Since he was speechless, they never knew when he was around or what violence he was up to until it was over.

Still, there was a sort of logic to Dusty's rash ways. Other folks could talk; he couldn't. But he could act on their ideas. That's what happened today. He heard Mr. Sleem complain about the mail being late. Mr. Sleem came back from the mail box angry, so Dusty decided to do something about it. He picked up the iron cat that served as a door stop and battered the mail box to junk. Then grinning with pride, he sat down to wait for Mr. Sleem to discover what he had done. When the master returned, his face flamed with rage. He marched Dusty off to the detention room to try to beat

some sense into him.

Sleem's beatings were no joke; nevertheless the inmates silently gloated over this incident. Let Mr. Sleem fry in his own grease. They knew he could never beat sense into Dusty's cloudy brain. Previous events proved that. They remembered the time that Mr. Sleem growled because the windows were so dirty he couldn't see out, and Dusty forthwith smashed out five panes before anyone could stop him.

"Mr. Sleem's sure to be in an ugly mood today," said Linda as she told Dave of these happenings. Her amusement was mixed with trembling. This constant tension was bad for her, Dave thought. She had grown up in a world of music, harmony, peace. Two years had not reconciled her to the harshness of this institution, its bad mixture of problems. Inwardly she rebelled.

Dave guessed her feelings, questioned her, listened tensely as she confided in him.

"If it hadn't been for playing the organ, I'd have run away long ago—but now—"

THERE was new happiness in her face, but her confession broke off sharply.

"Yes?" Dave pursued. Her loveliness inflamed him. His hand stole across hers. At once he seemed very close to her, almost alone with her. The only others in the room were the blind pupils engrossed in their own conversations. He wanted to take her in his arms but he knew Mr. Sleem would come in at any moment.

"I can't thank you enough for the radio you gave me," she said, discreetly changing the subject.

"Like it?"

"It's wonderful. You've no idea—*yet*—what it means to one who is blind . . ." Linda's joy was genuine. Dave's gift reopened a world she had lost—a world of music and of hope. She knew the danger to blind persons of sinking into mental lethargy. The radio promised new stimulations.

"Miss Yost has moved the other blind girls in with me so they can hear it too," she said. "We tune it in softly every night. Of course, Mr. Sleem mustn't know I have it."

Dave stifled an oath. That old fashioned pedagogue with his sledge hammer methods! It would be a blessing if some tortured creature like Dusty would turn on him some day and run him off the premises.

"It's a crime!" Dave declared. "With all the fine instruments there are to make life interesting, he still clings to the old ruts. Has he ever let you use the Talking Books?" *

Dave could have guessed the answer. Sleem was too much concerned with the goods his pupils produced to bother about putting anything back into their lives.

"Did you hear the radio news item about the blind person last night?" Linda asked. "Someone who is making a sort of automatic wheeled chair to get around in safely." The girl glowed with enthusiasm.

Dave swallowed hard. "Why—er—yes, I heard, that is—they didn't give his name—"

"No, just someone in Chicago who is going blind. But think!" the girl exulted. "Wouldn't it be wonderful! Of

* The Talking Books are recordings of printed books read by professional readers, loaned exclusively to blind persons, a benefit made possible by a Congressional appropriation. They are played on slow speed phonographs. Titles are both in ordinary print and in braille. Most books require several records; thus Lindbergh's *North to the Orient* requires 8; *Huckleberry Finn*, 19. A splendid variety of books is available; may come from England. The Chicago Public Library, one of the nation's 27 distribution centers, had a circulation of nearly 400,000 Talking Books in 1938.—Ed

course you've never thought about it yet. But soon you'll understand. You see, it isn't so bad to be without sight, if that's all there was to it. But to have to depend on someone else, wherever you go, whatever you do—that's the tragic thing!"

The girl wept in spite of herself. Dave breathed hard. She had never spoken of tragedy before. It came to him anew with a strange lingering chill.

LINDA applied her handkerchief and was all smiles again. She talked on of the good luck of the unknown person who was to have the robotcycle, wondered if he would appreciate his wonderful advantage, never guessed that the lucky person was the genial, soft-spoken young man who sat beside her, gripping her hand so tightly she could feel his heart beat.

Visions whirled through Dave's mind, left him breathless. He didn't try to put his thoughts into words. It was enough at the moment to be magically drawn by this beautiful spirit. Let them call her rebellious if they wanted to. He admired her rebellion, her fight to cling to her ideals, her love for esthetic things, her fragments of freedom.

In the rapture of the moment his arm passed back of her shoulders.

The spell was not easily broken, even though Mr. Sleem strutted in with considerable clatter.

Linda was right about the master's mood. Nor was Dusty responsible for all the angry heat that showed in his face. He saw Dave's arm drop away from the back of Linda's chair, his eyes snapped, his puffy lips clicked open. There was more than disciplinary fervor in his hot tempered impulse; there was jealousy, revealed as plain as the pince-nez he jammed to his nose.

A split second of hesitation. He wasn't dealing with Dusty now. This young man of the world was not on his disciplinary list. Very well, Linda LeFraine was, and he had a trap ready for her that would nip this little romance in the bud.

"Linda! You've got a radio in your room! Where'd you get it?"

Before the startled girl could utter a coherent word, Dave Melbourne spoke up to defend his gift to her. His cool frankness was disarming. But Sleem saw his way to decisive action.

"I regret, Mr. Melbourne, that I can no longer retain you as a pupil."

"What?" Dave blurted. *"Why?"*

"Unfortunately your presence has proved a detriment to our spirit of obedience. I must ask you to go."

Dave was stunned. Little did he guess how much Sleem regretted having admitted him in the first place, how deeply the pedagogue's jealousy ran. For all his harsh words to her, Sleem secretly regarded the beautiful blind girl as his private art treasure. It was his innermost intention never to let her out of this institution as long as he remained here.

"Come into my office, Melbourne. You're entitled to a slight settlement on your fees."

DAVE tried to argue the matter but it was useless. Dazed, he took the check and moved toward the door. Miss Yost called him back to the reception room. "Would you mind waiting a moment?"

He took a chair. Soon the matron returned to explain, "Linda wants to speak with you before you go. I've sidetracked Mr. Sleem for a minute or two. Here's Linda now."

The blind girl felt her way into the room. Miss Yost stepped out.

"David," Linda spoke in a tremulous voice.

"What is it, Linda?" He went to her, took her hand.

"I hope you won't mind what I'm going to ask you," there was a strange eagerness in her voice. "You see . . . I've never seen you."

Dave didn't know what to make of her words.

"But I've pictured you in my mind," she continued. "Maybe you've never thought about it, but after you're blind sometimes you'll almost burn up with curiosity to know how someone—some special friend—really looks. That's how I—that is—before you go, would you care if I passed my hands over your face?"

"Of course not," he laughed. "Why didn't you mention it before?" He put her hands to his forehead.

Her face lighted with joy. In spite of difficulty repressing her tears, she gave a quick, mischievous laugh. "I wanted to prove to myself that you couldn't possibly be as handsome as I pictured you." Her trembling fingers passed over his face.

Dave smiled, and her sensitive touch lingered upon his smile.

"Thank you," she breathed.

"Well, am I as handsome as you thought?" he asked, still smiling to her touch.

"No," she laughed. "But you're not at all bad looking. May I . . . once again?" She was radiantly happy.

For a second time the evil snarl of E. Caspar Sleem intruded upon an ecstatic moment. His words fell like slabs of stone.

"You are violating one of my rules!"

"It's a pleasure!" Dave cracked.

The master's rasping voice went violent. "Linda LeFraine, go to the detention room and stay there until—"

His words stopped like a radio snapped off. Astonishment cut him off—the unbelievable boldness of Dave Melbourne, who snatched Linda up in his arms and made straight for the exit.

Too flabbergasted to speak, Sleem blocked the doorway.

"Get out of the way!" Dave ordered. The shocked master gave ground.

"We're going out for dinner," Dave shouted back at Miss Yost, who looked as blank as the iron cat that served as a door stop. "Ill bring her back safely by midnight!"

Late that night, after a gay, glorious evening in downtown Chicago, a thrilling concert, and a far more thrilling good night kiss, Linda LeFraine was delivered back into the protecting hands of Miss Yost.

It was well after midnight when Dave got home, but before turning in he sketched the initial plans for some changes in the design of his house. Daybreak caught him as he turned his attention to the robotcycle design, converted it with a few swift strokes into a robotcycle for two.

CHAPTER III

Headed for a Crash

DAVE was dizzily in love. He knew Linda was the same way. His coming blindness seemed to draw them together. Without that, he rightly guessed, she would never have consented to marry him. In spite of her heart.

That was Linda. Too proud to take a chance on marriage knowing she might become a burden upon a husband, a drawback to his career. She had firmly vowed she would never marry. Then Dave came, facing blindness. That changed everything. Dave needed her.

Dave glimpsed all this vaguely, then forgot it. The feverish race against time engulfed him. He must get the

house built. At last, with Linda's help, it was planned to the final nail, the last photoelectric cell. To her great joy he insisted there must be a pipe organ. She revelled in anticipation, planned to put her few dollars into their building fund.

Dave's spirits were high. However, he might have been disturbed, had he heard the words of his doctors following one of his weekly examinations.

"He's a strange case," the senior physician commented. "He's apparently doomed to blindness, still the development is surprisingly slow."

"Perhaps the disease won't run its course," his assistant ventured.

"We'd better not give him any false hopes on that score," said the senior physician. "His sight will no doubt deteriorate swiftly before long. Damn, I hate it that there's nothing we can do. But those symptoms . . . He might come through an unaccountable exception . . . We shall see."

Under the pressure of time Dave rushed the construction of the robotcycle. Day and night. Plans, trials, tests, toil, sweat. Costly errors. Surprise successes.

Three heads were better than one. His comrades were loyal Trojans. They waded into obstacles, battled them as if they were nests of rattlesnakes. Six hands were better than two, or twenty for that matter. Results came.

Eventually the completed robotcycle rolled out of the shop, onto the sidewalks of Chicago. Rounded like an electric generator, its crystal hoods open, it gleamed with glass and metal, eased along on responsive rubber wheels.

A live prehistoric monster wouldn't have attracted any more cameramen. Or excited children. Or half-frightened old ladies who were sure someone would get killed. Or preoccupied businessmen, the sort who pause barely long enough to utter, "What's the world coming to?" whenever they see something they don't understand.

THE long awaited day. The robotcycle moved southward over Chicago's endless sidewalks. Dave sat at the controls. Strob occupied the other tandem seat, watched critically over Dave's shoulder. There was no room for Eddie so he coasted alongside on a rented bicycle.

By midday the party stopped before Mother Rafferty's Home. Linda was ready. Miss Yost, who had achieved a temporary victory over the dictatorial Mr. Sleem by appealing directly to Mother Rafferty, was also on hand, scarcely less excited than Linda.

Dave escorted the blind girl down the portico steps and introduced Strob and Eddie to her. His assistant inventors had never seen her before.

Eddie nudged Strob and mumbled, "Gosh, ain't she a beaut!" A common error, to forget that blind persons hear what you say about them. Naturally, Linda heard and they all laughed, but Eddie had no trouble defending his opinion.

"Will you step into my carriage?" Dave said proudly. "It isn't quite as speedy as the Illinois Central or even as a street car but it makes nicer music." They got in.

"I'll follow along on the bicycle," said Eddie.

"What makes you think they want to be followed?" Strob cracked.

"Yeah, that's right," Eddie grinned. After all, the robotcycle had passed its test; it was ready for service. "Guess I better pump back to the city and stop the rent on this thing."

"We'll see you later," said Strob. "Don't forget to make a recording of the dial sounds. So long."

Phonograph records would be a use-

ful device for anlyzing the sounds.

The robotcycle for two coasted along beautifully. Primarily it was a miniature electric automobile; its fuel, a small but powerful battery. Linda was amazed at its simplicity. A rheostat arm, a steering lever, brakes, a switch for reverse—those were the driver's principal gadgets. In addition, there were numerous automatic controls, automatic stops, automatic dodgers and rectifiers. Dave wanted to explain everything at once.

"But where's all the funny music coming from?" Linda asked.

"That's the dial sounds. They're an an awful jumble at first, but the separate tones soon take on meaning. That strongest hum is the sunlight reflected off the cement sidewalk. Notice how it breaks with a low click at regular intervals—"

Tip . . . tip . . . tip . . . tip. . . . Fine as pin points Faster as the robot accelerated.

"That's the cracks in the sidewalk. Very useful, too. They keep us going straight, with the help of the automatic rectifier. If I deliberately turn off at an angle—"

He swerved the craft to illustrate his point. Immediately there were double clicks, one from the right side of the instrument board followed by one from the left. It was no trick for the ear to catch the meaning.

"We're angling to the left," said Linda.

"Exactly!"

The craft retarded to a stop.

"We're at the curb," Dave explained. "A safety gadget stopped us. We can't even roll over a two-inch curb unless we release the automatic brakes. That low buzz was the safety brake warning."

"It's marvellous," Linda gasped. "But I never knew before that you could get music out of a sidewalk."

DAVE laughed. "It's rather a roundabout method. The light vibrations are far too rapid to convert directly into sound. We'd never hear them. But we've devised what we call light interpreters. The robotcycle's electric eyes reach out. The impulses they pick up are translated by the light interpreters to govern these vibrators we hear. We adapted the tone ranges arbitrarily, for the convenience of our ears."

"Light interpreters!" Linda echoed in a voice that spoke volumes of appreciation. She breathed poetry into scientific mysteries. "It's as if light is simply a foreign tongue we've forgotten, which only needs to be translated into the language we understand."

It was glorious fun, the entrance to a new wonderland of sensations. Very dizzying at first, then clearer, clearer.

That night when Linda's friends at Mother Rafferty's besieged her with questions, her answers sounded fantastic even to herself. But there was the portable phonograph, the newly made record of the ride she had taken. Young and old gathered around to listen.

Echoes of the excitement carried down the hall stairs to the office of E. Casper Sleem, who sat seething with silent hate. His dictatorial reign was eroding away. Tides from the outside world swept in, threatened him. Linda and her inventor. Radios. Phonographs. Yost appealing directly to Mother Rafferty, getting him in bad. Well, there was still time to put things to rights before Mother Rafferty passed on. Get back into her good graces. Bide his time. Persuade her to sign things over to him with her last breath. Not a bad stunt to go over to the hospital for a chat with her now. He rang for his chauffeur.

"Sounds like Chinese music!" one of the children laughed as the curious rec-

ord played.

"It's a game, isn't it, Linda?" another asked.

"It's a robotcycle music," Linda explained. "Listen to the notes change. Every change is something we saw—that is, with our electric eyes."

She replayed the record, gave running comments: "Now we're moving along. Hear the click of the sidewalk? . . . And the longer clicks—shadows of lamp posts . . . There, that low clatter—we rolled onto a brick walk . . . And that sputter—we edged over into a lawn. . . . Now we're back. . . . The pitch gets lower as the sky grows cloudier. . . . And now you hear Dave explaining to me what happened. . . . More cement sidewalks. . . . We slow down on that low buzz. The curb stopped us. . . . A dark car passed ahead of us. . . . Dave tells me there's no stop light at this intersection. Now we're crossing. That's our siren you hear. Our red neons are flashing too. . . . Street car tracks. . . . Dark pavement . . . A high curb. Our stilts lift us and we vault over . . . Sidewalk again . . . We're turning. Hear the clicks go double. . . . There we dodged something, probably a lamp post. . . . Now we creep along near the buildings. . . . People walking past us. You can tell how much room they have. That thin whine grows louder as they come close. Sounds dangerous at first, but soon you think nothing of it. Even when cars cut in ahead of you on the intersections."

"What's that funny sound?" someone asked.

"That's when the rain began to spatter down and we closed the hoods over us. And that's where the record ended."

"But what was that last noise that sounded like a kiss?" one of the youngsters asked.

"It's time for you children to get to bed," Miss Yost snapped.

DURING the robotcycle rides of ensuing days Linda learned rapidly. She took in the symphony of dial sounds with keen ears, played them over on records, dreamed them at night. Dave was a good teacher. He gave her practice at the controls and she learned to get around in the suburban neighborhood she knew. But never guessed how soon a serious task would fall upon her.

Dave chilled at the strange feeling in his eyes. He said nothing, waited a day—two—three. His eyes grew tired, dim. Perhaps the time was near.

As if to deny the horror he felt, he told no one. His evenings with Linda were too rapturous now to blight with a mention of his tragedy. Time enough for that.

Then, without any further warning, came the fatal night. They started home from an open air concert in Grant Park. Linda listened to the singing instrument board as people moved past them. They hesitated until the crowd thinned, then moved out into the stream of motor traffic. Their craft had long since proved itself highway-worthy.

"I must be off our route," Dave commented apprehensively.

"No," said Linda, intent upon the instruments, "this is right." They floated along slowly.

"I wonder why so many cars are driving without lights," Dave complained. Again Linda took exception.

He became nettled, nervous. "The instrument board has gone haywire." He rolled the craft out onto the shoulder, stopped, got out, gasped. "Great stars! Our own lights are off. Everything's dead black. What do you suppose—?"

His own words told him the answer. Linda knew too. The shock of finding

everything suddenly black was a familiar nightmare with her. Dave was blind.

So this was the tragic moment he had rehearsed in his mind so often. Until now he thought he was prepared for this emergency. Here was the robotcycle he'd put hundreds of dollars into to do his bidding. But curiously, cold reality froze his faculties. He was seemingly paralyzed. The craft's controls he had wielded so deftly as long as his eyes kept working, now defied him. His hands went limp.

It was late, but the cars still streamed by on the outer shore drive. Here they sat, tragedy stricken, blind, both of them.

But not stranded. For Linda had learned the dial sounds without benefit of sight. She and Dave changed places.

An hour later, having rounded the Loop, they rang at an apartment house for Eddie Biddle, who gladly came to the rescue, escorted them to their separate homes.

DARK days at last. A crisis in anyone's life. In spite of Dave's iron constitution, his loyal friends, his sympathetic sweetheart, the reality of blindness shook him. New troubles bombarded him too fast for him to remember that, had he escaped this fate, he would never have won Linda.

Linda understood his trials, eased his fall, led him step by step into the ways of darkness. She felt a glow of pride in having a personal responsibility. How much more vital and personal than her one former self-expression, music. Here she was actually needed as a companion and mate. She counted the days until the house would be finished and they would be married.

An electric organ went into the house.

Linda contributed everything she could to Dave's fund. She saved and sacrificed on every corner. Her small inheritance from her parents was in the care of Mother Rafferty's Home, and Mr. Sleem refused to release it to her until she finished her courses. However, Miss Yost advanced a loan on it, and Linda invested it.

Dave's first month of blindness came to an end. It did not bring him ease over his new situation. He was sensitive about his eyes, covered them with blindfolds.

At last the house was ready. Tomorrow he would marry Linda. Life would then be as perfect as it could be for a blind person. A lovely wife, fine friends, a specially arranged house, robot transportation, and soon a workshop, an occupation—what more could a blind man ask of life?

Such was Dave's outlook on that memorable Saturday in midsummer when, as he changed his blindfold, he looked up to see the afternoon sun glaring over the housetops . . . looked up to see the sun glare . . . to see—!

His sight restored! By what miracle he neither knew nor cared. The bald fact was there. He could see again! His blindness was gone!

He cried the news to the rooftops. Strob and Eddie were floored. He phoned it to his physician who, to his utter surprise, confessed he half expected it. "Your worries are over," he said.

He leaped into his robotcycle—force of habit—and sped southward. He would deliver the great news to Linda in person.

Down the outer shore drive he spun at high speed. But as the instruments sang their weird harmonies, sober second thoughts filtered into his mind. A sudden sickness came over him a feeling that he was headed for a crash.

Not a robotcycle smash-up. Something far more serious.

CHAPTER IV

Sleem's Iron Fist

TOMORROW Linda would become Mrs. David Melbourne and everything would be different.

But today was just another revolting day in Mother Rafferty's Home. The same old ugly troubles, only worse. Ironical, it seemed to Linda, that with her personal happiness so nearly perfect she should still be mired down in this awful hole.

To everyone else but Linda, Sleem was more disagreeable than ever. He was suave and polite to her. It burned her up that he thought he could still break up her match, keep her here.

Since Mother Rafferty's death last week, he had seized the reins, stiffened his old disciplines. New rules. New punishments. While the inmates still mourned the death of their benefactor he clamped the new regime on them. He was the superintendent now. Mother Rafferty had signed the leadership over to him in her last hour.

His first official act was to fire Miss Yost w i t h o u t notice. Linda was shocked. She owed the matron money. Miss Yost would need it now.

But Linda's appeal to Mr. Sleem for her inheritance money only met with polite refusal. Though her courses were finished, he trumped up other obligations for her. She hadn't made her quota of baskets, she hadn't fulfilled her hours of housework, she owed the home some more organ concerts. In the meantime he would keep the money on deposit for her at interest.

She seethed with rebellion but held her tongue. Dave would be here soon. He would soothe her, help her find the way out. Then tomorrow—she would be out of this mess for good.

Her ears caught a familiar click from the street. Dave locking the robotcycle. His footsteps on the walk were good to hear. How much more confidence than he had during his first weeks of blindness!

There was a strange excitement in his manner as they went into the reception room together.

"We've got so many things to talk about," he began, adding, "in confidence."

She gave his hand a warning pressure. There might be someone in the room. He nearly forgot that. She reminded him that the blind do well to survey the premises before they sit down to talk in confidence. He was strangely impatient as they did so.

"Tomorrow you can f o r g e t that rule," he said. "We'll have the privacy of our own home. All this fear of being watched will be over. And you'll be through with Sleem forever."

"I hope so," she trembled, then poured out her troubles and fears.

"Don't worry, dear," he comforted. "There's nothing to keep you from running out of this place—even tonight if you want to."

"We could elope," she laughed. "That would be one for the papers—two blind persons successfully elope!"

TWO blind persons! Dave looked at her, bit his lips, held his breath. It was gloriously good to see her again, yet he scarcely trusted himself to look at her. He was on thin ice. He must tell her at once. Great stars! How he hated to break into her rhapsody.

"Oh, Dave!" She drew close to him. "I can't tell you how happy you make me. This is the way it had to be for me. Both of us in the same world, even though it's a dark world. Love has to be equal. I know it's been dreadful for you to have to go blind, Dave, but if it had to be -I'm thank-

ful you came my way. I—I'm trying to tell you I couldn't marry you if you weren't blind."

She put her fingers to his forehead, brushed them lightly over his eyelids. His heart pounded audibly.

"Linda," Dave's low voice throbbed. He couldn't think of losing her. In all the furious turmoil that fought within his mind, he never slipped for an instant on that point. Linda was the most important thing in the world to him now.

"What is it, Dave?"

"Linda, I—" He shuddered to say what he must say. Another word or two and her castle would shatter. Dreams, plans, home, robotcycle, electric organ—all would crash to the earth in a heap, and crush Linda to the very soul. His nerves went soft. "Linda—we're going to be very happy."

That was all he could say. She nestled her head against his shoulder trustingly.

Light footfalls sounded at the door.

"Sleem," Dave whispered. "He's coming in." Linda gave a start. Dave quickly added, "I've learned his footstep."

That was nearly a bad break. Did Linda suspect he could see again? Dave felt the perspiration pour over him.

The footsteps moved away. "We're alone again," Dave said casually.

"Are you sure?" There was nothing suspicious in her tone, yet Dave found her words accusing. He must sidetrack her doubts. Her words burned in his mind. "I couldn't marry you if—" Like a great weight placed upon his head came the realization that she must never know. He would play blind for her through the coming days, even down through the years if necessary. He must hold her illusion together at all costs.

Her hand brushed across the table top, picked up a fleshy volume printed in braille, turned the crusty pages carelessly. "Read to me, Dave. Something soothing."

He kept his eyes off the open page, passed his trembling fingers over the raised letters, pronounced the words slowly as they came to him.

"Never . . . deceive . . . a . . . blind . . . person . . . for . . . in . . . doing . . . so . . ."

HE STOPPED, mopped a clammy hand over the back of his neck.

"You're not reading as well as you did the last time," she murmured, "but I love to hear you. Please go on."

"Let's find something else," he suggested hoarsely.

"But I liked that paragraph, Dave. Try it again."

"Never . . . deceive . . . a . . . blind . . . person . . . for . . . in . . . doing . . . so . . . you . . . destroy . . . his . . . confidence . . . forever."

Something within Dave tore loose. He slapped the book shut. "Silly stuff!" he roared. Springing up in a fit of torment, he pounded across the room to the window.

He stood there for minutes despising himself. Linda must have guessed as soon as he came. She had picked that paragraph to catch him. He'd fallen into the trap, admitted by his actions that he wasn't blind. No blind person would dash across the room the way he did. What a mess he'd made of things. It was too late to say anything now.

Suddenly a sound from the street distracted him. Clanging metal. He fixed his eyes on a blurred sight in the thickening darkness. Dusty!—at the robotcycle, pounding it with something!

"Well, I'll be—! DUSTY!!!" His

sharp cry was lost on the half-witted creature. He flew through the room shouting, "That idiot's smashing up the robotcycle!" He stormed out, left Linda in the red air of his anger. Reaching the street, he snatched the hammer out of Dusty's hands, demanded, "Where'd you get this?"

Dusty only grinned.

"This looks like a put-up job to me. Speak up, you idiot! Where'd you get this hammer?"

Dusty couldn't speak. He could only act. He broke and ran as hard as he could go. Dave glanced at the damages. The shatterproof glass in the hood had given in a few places. Dents over the metal surfaces. Some electric eyes broken, neons smashed. No telling how much the delicate instruments might be injured.

Linda held her head in her hands. The echoes of Dave's trouble with Dusty terrified her, and she listened intently. Then the sounds ceased, except for Dave's footsteps. The hurricane of troubled thoughts rushed over her again.

Before her was the hardest decision she would ever have to make. She must decide at once. Dave was madly in love with her. He would have carried out a costly deception for her if he could have. What extreme devotion and sacrifice—but how foolhardy! She shuddered to think what a narrow escape. Dave was the one to be considered. He had his career before him again, as bright as in the days before she met him.

SHE tried to peer into the future years, tried to see the two of them together. All she could see was Dave watching her through his good eyes, his love changed to pity, his career dragged in the dust—lying to her bravely, but inwardly sick of his bargain. No. It couldn't be!

True, the marriage of many blind and sighted couples was very satisfactory. But she knew she and Dave were not fitted for such an arrangement.

She must send him away. At once. Before her devotion to him overpowered her resolve. It was her turn to deceive—to lie—to act—as never before. Send him away with all the strength of her love.

She thought she could feel the blaze of his eyes as he strode in. The smashed robotcycle hurt him. As if a friend had been crushed. He paced about, indignant, swinging his fists, thirsting for an outlet for pent up fury. He knew well enough who was back of the crime.

"Not that I'll ever need the robotcycle any more," he muttered bitterly. Linda waited silently until he could bring himself back to the more agonizing, more elusive issue. Then she spoke.

Her words were cool and penetrating. "You're not blind any longer, Dave. What do the doctors say? Have you really recovered?"

"Yes."

"You don't know how lucky you are. Why don't you run away from me and never come back? Find some girl who is your equal—"

"Linda, don't! I couldn't think of it!"

"Then we may as well face the facts, Dave. I can't go on pretending to love you. It was good fun as long as we were fighting blindness together, going places in the robotcycle, planning conveniences we both needed. But we're not on an equal footing anymore. Any feeling I have left toward you can't be love. Please remember that. You must return to your own world now. I must remain in mine."

There was nothing in her words that

Dave could resent. Only the sting of his own deceit burned him. He knew this was final. He must face the truth —Linda was lost to him forever.

The blow was almost too much. Had it only come from something physical that he could fight back at—but this came from his misfortune to regain his sight—from pretending to be blind—from the idealism of this lovely blind creature. He stood before her a stifled volcano, boiling with agony yet powerless to explode.

THEN E. Caspar Sleem walked in, barked something about keeping order—and the lid blew off. Dave fairly plunged at him, shouted his repressed fury.

"You put Dusty up to that trick, you skunk! I saw you watching him!" His fingers seized a handful of Sleem's shoulder.

The arrogant master was ready for this showdown, had looked forward to it. But not as a physical combat. He squirmed out of Dave's hand, stepped away haughtily, dipped into his pocket for his spectacles case.

"We've had enough of you around here, Melbourne." He jammed his pince-nez on his nose. "You've made nothing but trouble for this institution since the day you came."

"What about that damage on the robotcycle?" Dave cracked, crowding toward him.

"That's no business of mine!"

"You put him up to it!"

"I don't know what you're talking about!"

"You lie, Sleem!"

Linda cried, "Dave—please!"

Sleem seized his advantage. "You've annoyed Linda enough, Melbourne, coming here day after day, pretending to be blind!"

"Why you—" Dave caught him by the collar, seized the spectacles, slid them onto the table, then hurled him across the room. He went into the wall with a jolt, shrank backward, his puffy lips trembling.

"Get out, Melbourne! Get out or I'll call the police!" His command was a wail of desperation.

"Call them! I'd be delighted!"

There was no bluffing Dave. But one strategy was effective and Sleem came back to it. "You can't act this way in Linda's presence. I order you to go!"

"I'll go when Linda tells me to, not before," said Dave, cooling a little.

"Then please go, Dave," the girl said. Her words brought a leaden silence.

"All right . . . I'll go." His voice acknowledged his final defeat. He trudged out.

Dusty, lurking outside the reception room door, grinned at him as he passed. Sleem's boastful snarl echoed after him. "If he ever comes back again I'll break his head in."

Linda quickly retreated to her room, sobbing.

Dusty skipped along a few steps back of Dave, followed him through the front door, picked up the iron cat that served as a door stop, hurled it, grinned with satisfaction as the missile struck its mark. The form retreating into the darkness fell, tried to rise, stumbled off crazily.

CHAPTER V

Dave Follows Through

EARLY the next morning a truck stopped before Mother Rafferty's Home, loaded up the mutilated robotcycle, drove off.

Later that forenoon a doctor walked down the ramp from Dave's newly fin-

ished home, got into his car, departed.

Strob and Eddie, who lived across the street, did not see him. Eddie stood before a tie rack, tried to pick one of Strob's winter neckties to go with his own new summer suit.

"What time they supposed to get married?" he asked.

"Two o'clock," Strob grunted, dabbing at his white shoes.

"Boy! What a break, to get his eyesight back!" Eddie gloated. "As a wedding present, t h a t ' s something. But say—you don't suppose that upset things, do you?"

"Why should it?"

"Well, I don't know. I thought maybe, now that he's over his blindness, he wouldn't feel like marrying a blind girl. Ever think about that, Strob?"

Strob carried his shoes to the window to dry. "I thought the whole deal was a leap in the dark at first. Then I met the girl and changed my mind."

"Yeah. You can't make any rules on those things." Eddie settled on an orange tie with green airplanes. "Say, what do I do at this wedding besides be the best man?"

"*You* the best man! Don't be funny. That's *my* job. Maybe Dave'll let you give the bride a w a y , or pay the preacher, or if you behave yourself maybe—" Strob broke off. Something he saw through the window froze him.

"Maybe he'll let me kiss the bride, huh?" Eddie finished.

"By George!" Strob shouted. "Look here, Eddie! The robotcycle!"

Eddie jumped to the window. Across the street two men unloaded the battered craft from a truck.

"He's had a crack-up!" Eddie flung the necktie to the chandelier and dashed out, Strob on his heels.

Dave answered the bell through the speaking tube.

"Are you hurt?" they called. "What happened? Let us in! What's wrong, anyway?"

"I'm all right," came Dave's voice. "I'm resting. Come back later."

"What about the wedding?"

"It's off."

They stood aghast. Dave's brittle voice told them it wasn't a good time to ask questions.

"The robotcycle just came in," Strob said. "We'll check it over and see you later." He clamped a hand over Eddie's mouth to stifle any further questions. They walked off dumbfounded.

Days passed. Dave did not invite them in. He talked with them only briefly through the speaking tube, seemed interested to know they repaired the robotcycle, but told them nothing. Only through his doctor did they learn what had happened.

IT WAS a week of dark brooding for Dave. He moped about from room to room. He wearied of the radio, passed his hands listlessly over the organ keys, got his own meals, but had no appetite. He whiled away some time with the slick new visagraph that was to have been a surprise for Linda. It worked nicely. From ordinary print it brought forth large raised letters that the fingers could identify. But in his dazed state he found small comfort in it.

The volcano within him would not quiet, he could not rest. As the long hours passed, he grew impatient with himself for turning slave to such a heavy mood, tried to analyze himself. He wished he had socked Sleem on the jaw.

Clearer and clearer the details of that frantic hour came back to him, always with Sleem in the spotlight. His big chance to wallop that coward and he'd passed it by. Let him off from

pity. Well, if he had another chance it would be different.

The more he thought of it, the more he was determined to make another chance. Give his fists one good orgy. Then maybe he could come back home and rest.

He unlocked his robotcycle and got in, unaware that Strob and Eddie saw him.

Never once did he tell himself, as he coursed southward, that he was growing closer to Linda. She was out of his thoughts.

He locked his craft—he'd have to take a chance on Dusty this time—and walked slowly in toward Mother Rafferty's Home. Familiar notes of the robotcycle's instruments wafted from a phonograph somewhere within. Disturbing. He extinguished the sentiment that gnawed at him. It was Sleem he came for. Sleem. Sleem. Sleem. He walked into the place in a cloud of red, asked for Sleem.

"Come into the reception room, please. I'll call Miss Yost.

"I want Sleem."

"Wait here, please."

MISS YOST came in. "Oh, it's Mr. Melbourne!" In her friendly manner, the matron broke the news that dashed cold water over Dave's flames. "Mr. Sleem is no longer with us. As soon as he fired me, I forced an investigation of his management, and now—well, briefly, he's gone. I'm the new superintendent—and by the way, I've transferred Dusty to a more suitable institution. I presume you were interested in—" she hesitated—"collecting damages for your—"

"I simply want Sleem," Dave said. "That's all I came for."

Miss Yost understood perfectly, perhaps better than Dave understood himself. "Please wait here a moment, Mr. Melbourne. I'll—" She left.

A minute later Linda was in his arms.

"Oh, Dave, it's so good to see you again," she breathed as her trembling hands swept over his face.

"It's good to see you, Linda." He passed his fingers eagerly over her eyes, cheeks, lips. "You're looking very beautiful."

"Miss Yost just now told me that you are again—"

"Yes," said Dave, "again—"

"When did it happen?"

"That night I left you. Dusty followed me out and struck me across the head . . . I must have staggered away. The police found me and got my doctor. It wasn't so bad. Anyway, Linda, I've learned there are lots worse things than being blind, especially when you and I have—everything."

"Yes," said Linda, burying her face against him.

Miss Yost answered the doorbell, recognized the two excited looking gentlemen to be Strob Rezabek and Eddie Biddle.

"We're sort of looking after our friend, Dave Melbourne," Strob explained. "He's blind again—so we followed him out here—"

"We picked up a preacher on the way," said Eddie, "just in case—"

Miss Yost smiled. "Bring him in."

MAMMOTH DETECTIVE

320 Pages of Thrill-packed, Top-notch Detective Fiction

A TITAN OF QUANTITY AND QUALITY—NOW ON SALE—25c

REFRIGERATED HUMANS

By KEN KOBER

A LITTLE more than eleven years ago Vincent M. O'Connor considered himself the happiest man on earth; he was madly in love with a pretty, little, milk-skinned girl of nineteen, whom he'd met while an Eton scholar in England. Her name was Mary Irving and, as a prelude to their marriage, her father, R. L. G. Irving, suggested an Alpine climb. Had he known what was ahead he would have preferred to stay home and roam the English moors.

Accompanied by six other climbers, including Mary's father, Mr. Irving, the climbers began the treacherous climb to Point L'Eveque (Bishop's Peak). O'Connor held the last position on the life rope always reserved for a man—and his sweetheart was next. On a short ice ridge 11,700 feet high, near the summit, O'Connor slipped. The safety rope grew taut, strained—and broke. But strangely enough it broke, not in front of O'Connor, but between his sweetheart and the sixth person on the line.

While her father and other members of the group stared in horror, they saw the girl and her sweetheart plunge through an immensity of snow and ice until, deep in a crevasse, they were gripped by the glacier still embracing each other as if in a loving farewell. The fall may have killed them instantly, or they may have merely been stunned; but the ghastly fact remained that they would freeze where they were in the clutches of a glacier that would not give them up for at least a thousand years.

Glacier experts explain that these ice mountains seldom give up their dead without years of waiting. The ice field disintegrates at the edges and only slightly in the center. This being the case, there is little likelihood that the two lovers will be released within less than a thousand years. Instead, through the ages, they'll sink lower and lower until they reach the bottom of the glacier where they will still remain imprisoned, because Alpine glaciers remain "dry" or solid at the base.

There have been more "fortunate" cases wherein glaciers have given up their human booty within a few decades. For instance, Lord Francis Douglas' relatives waited thirty years for the glacier to give up his body. When the icy monster released him, he was the same handsome figure of thirty years before—totally unchanged in appearance.

For forty-two years Edith Randall waited for an Alpine glacier to free her father, John C. Randall, a Quincy, Mass., banker. When at last the icy tentacles melted away, the still young looking Mr. Randall came forth exactly as he was the day of the tragedy which imprisoned him.

Tie up these bizarre happenings with modern science and a strange tale found in a Vermont newspaper dated 1890.

The document from the Vermont newspaper gave an accounting of some poor hill folk who resorted to "human hibernation" in order to save food during the trying winter months and have extra farm hands during the busy summer season. The old and infirm who couldn't contribute to the support of their families were disposed of by drugging them and then letting them freeze solid. Next they were nailed up in a huge box as protection against roving animals, and put out in the cold for the duration of the winter

In the spring the bodies were removed, placed in large wood troughs with some hemlock boughs, and immersed in very hot water. Within an hour color returned to the bodies, they began to twitch, gasp, and show definite signs of returning life.

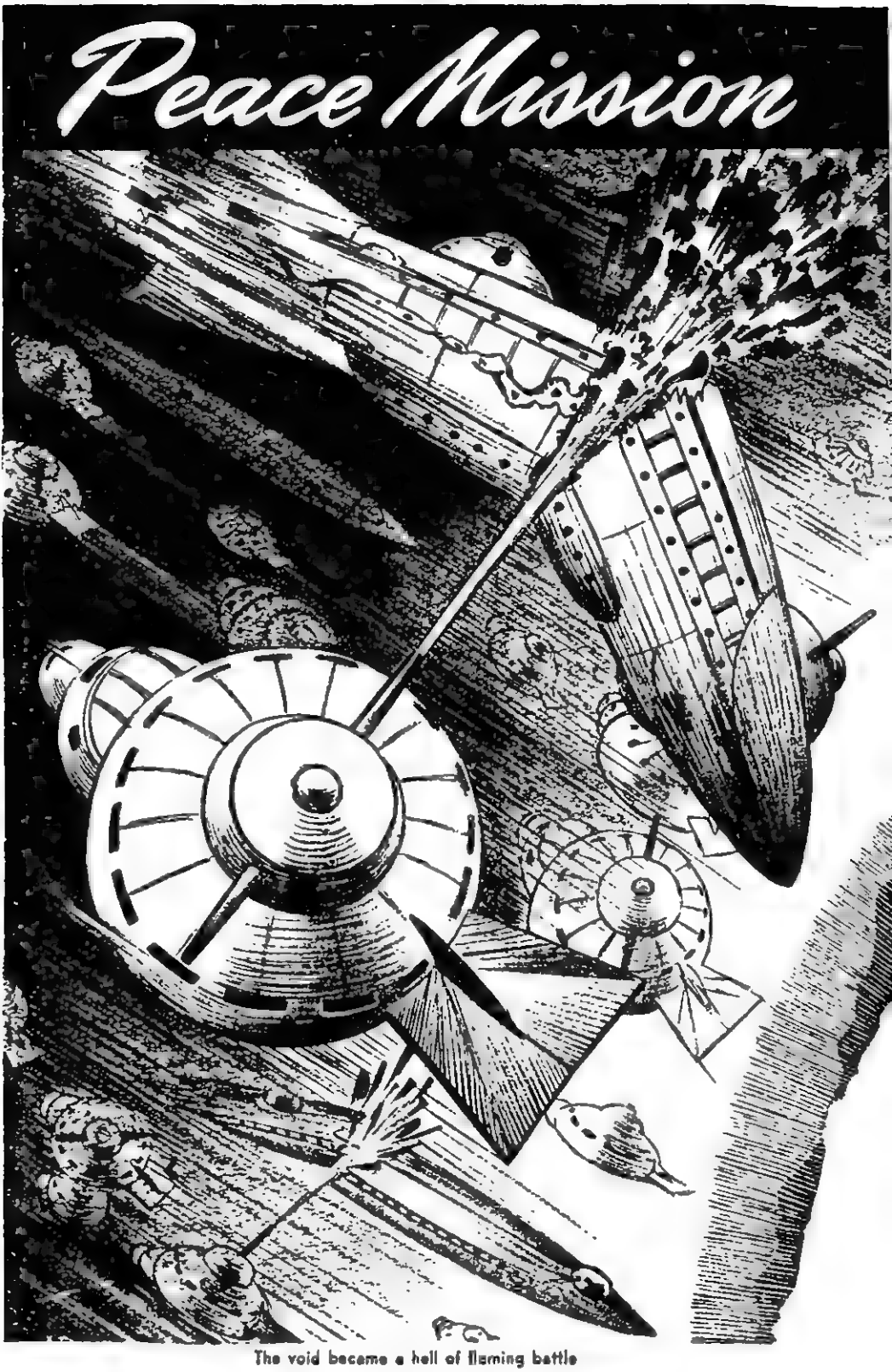
Scientists believe that if the body can be frozen fast enough and thoroughly enough without damaging any of the tissues, resuscitation may be possible even after many years.

Today, however, frozen sleep is still considered therapeutic medicine. That is to say it is used to cure human ills, not to postpone death. Its use in the all-outwar against cancer is rather well known. By reducing the body temperature scientists have found that incipient cancers tend to be "starved" out of the body. But a still newer use for frozen sleep is in the treatment of mental diseases. In the spring of 1941 Drs. John H. Talbott and Kenneth J. Tillotson of Boston subjected ten schizophrenic patients to a light anesthetic to desensitize them from the cold, wrapped them in rubberized blankets through which a fluid refrigerant circulated, and by this method reduced their body temperatures to between 80° and 90°, with even lower readings for very short intervals.

One patient, a young woman who had not spoken to anyone for more than two years, talked lucidly when her temperature was around 89°, but she would lapse into confused speech when the temperature rose to 93°. But after three bouts with refrigeration her mental condition began to show signs of improvement. Of the ten patients treated with frozen sleep, four of them progressed satisfactorily.

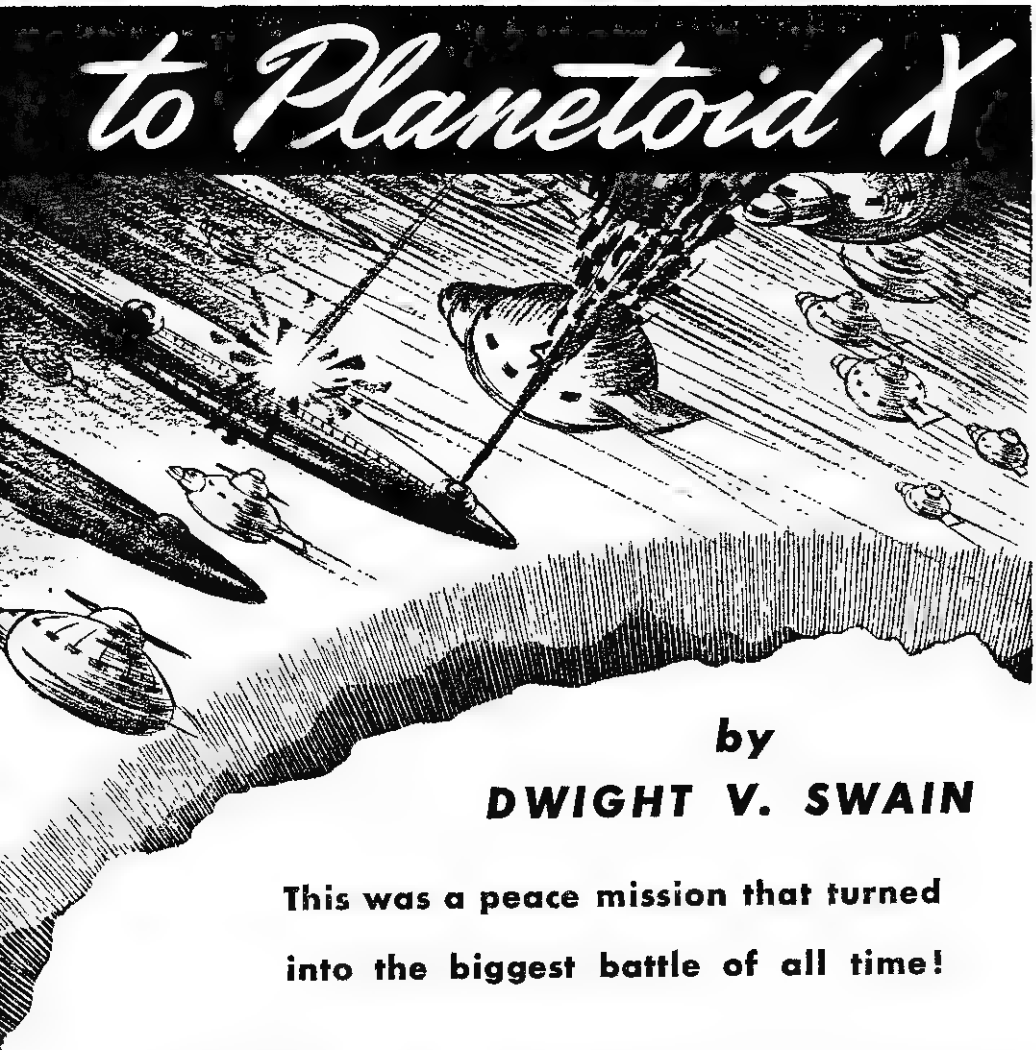
Science does not yet know what happens to the mind during a period of frozen sleep. It is believed that the brain is shocked into sensibility, literally shaken from its perpetual stupor. Could such a process be used to shake a solidly frozen body into warm, glowing livelihood? Will we ever be able to gradually thaw out the dead, and possibly bring back the two lovers one thousand years after their fatal plunge?

Peace Mission



The void became a hell of flaming battle

to Planetoid X



by

DWIGHT V. SWAIN

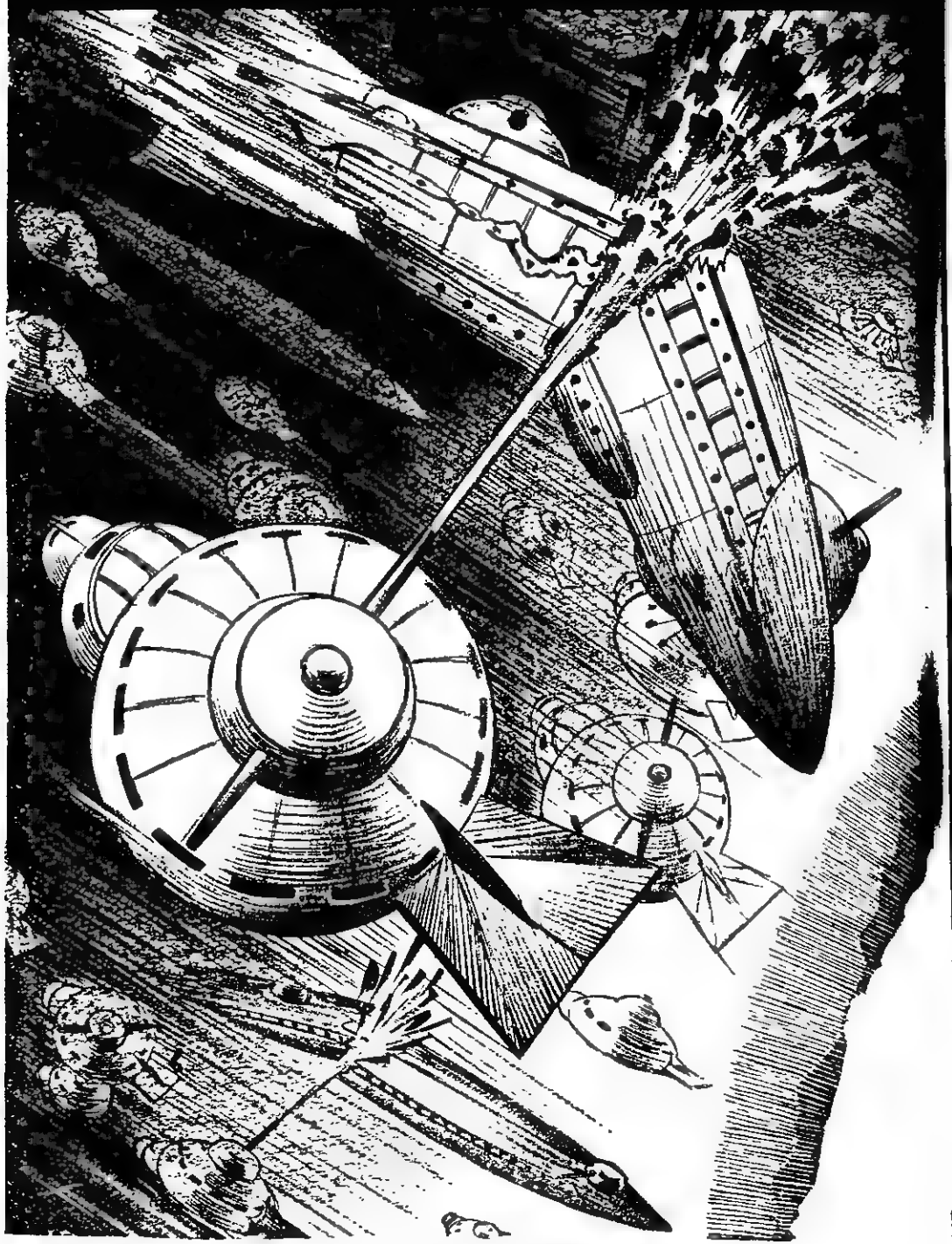
This was a peace mission that turned into the biggest battle of all time!

"AND if they're hostile?" badgered Eberhardt in a voice that dripped biting sarcasm. "What then, General? Tell us just what we do, with our one space ship and our handful of human misfits!" The sharp features of his gaunt, sallow face twisted in a savage sneer.

General Wolfe stalked heavy-footed across to the other side of the war cruiser's narrow cabin. The thick-stocked riding crop he habitually carried as a memento of those long-dead days when he had been a major in Earth's last cavalry regiment beat a vicious cadence against the polished leather of his boots with every step. Wheeling, he faced the little group of experts who headed this strange expedition into the void. He braced his great shoulders against the dully metallic wall. His deep-set eyes flashed fire at his harasser.

"What then?" he thundered, the rumble of his voice changing the scientist's caustic question to a booming challenge. "Why, then, you spineless cynic, we *fight!* We break these puny invaders from outer space like—like twigs! We wipe every last semblance of life from the face of their pigmy planet—!" His face grew red with

Peace Mission to Planetoid X



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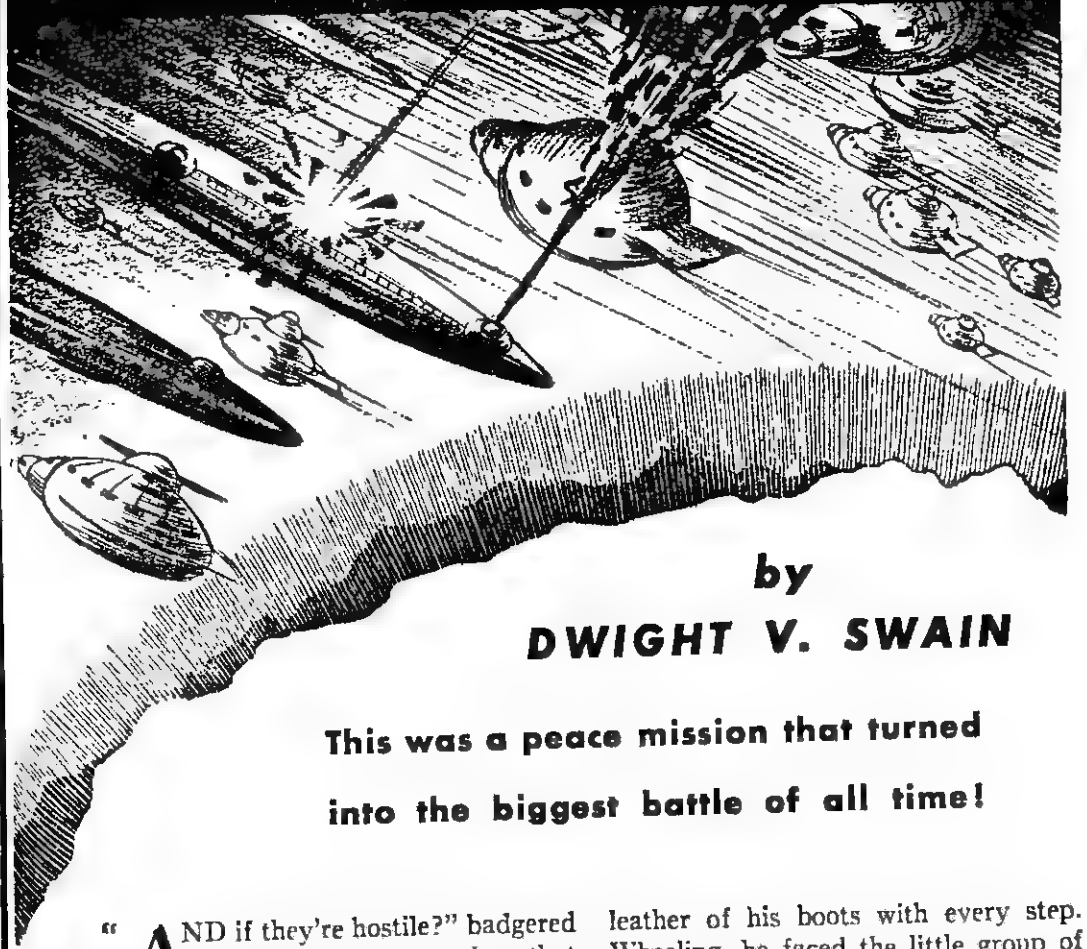

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excitement. He whipped the air with the crop as if he were cutting down enemy battalions with a saber.

"Excuse me, gentlemen," broke in a younger, calmer voice, "but aren't we all taking a lot for granted?"

All eyes centered on the interrupter. General Wolfe glared. "And just what d'you mean by that, Captain Whitman?" he boomed.

His aide flushed and rose from his chair to a brisk "attention." "My apologies, sir. I shouldn't have spoken. I forgot myself."

The general brushed aside the apology with an impatient gesture. "Forget it, Captain. This isn't the time for formality. Speak up."

The tall young officer relaxed. "Thank you, sir." He hesitated for a moment. Handsome in a solidly masculine way though he was, there somehow was an almost haunted look about him—a strain, a tenseness, that never quite left him. Perhaps it was the way he smiled; his lips curved naturally enough, and his face wrinkled with apparent good humor, but his eyes always remained the same: somber and pensive, as if tragedy already had marred his life beyond repair.

"All I meant, gentlemen," he explained, brushing back an unruly lock of brown hair, "was that so far we haven't any indication that there'll be any hostilities. We don't even know whether this 'Planetoid X' is inhabited—"

ANOTHER of the men assembled in the space ship's cabin cut in: "Here, wait a minute, Whitman. Our observers—"

"Our observers reported definite indications that Planetoid X at one time or another supported some sort of civilization. Well, so did Mars—once. But what's there now? A few flying reptiles, wandering around in a desert. And Venus—animated mud puddles with no more intelligence than amoebae. You all know as well as I do that there aren't half a dozen planets in the whole solar system with civilizations amounting to anything."

He hooked his thumbs into his Sam Browne belt in an easy gesture of conclusion. "So why should this asteroid be any different? It had a civilization once; but has it one now, in 2314? After all, it took a whale of an explosion, somewhere out there in space, to throw it into Earth's orbit."

"The international council seemed to think there was something there," one of the group grumbled. "They ordered this expedition."

Young Captain Whitman nodded. "Sure. It isn't every day that an asteroid as big as Planetoid X becomes Earth's satellite. Naturally the council's curious. Naturally they want a peace treaty with this planet's people—providing there are any. This isn't a war expedition. As Professor Eberhardt says, it's too small, too weak. Our job is to avoid trouble, not get into it. So why worry ourselves into a lather until we've got some reason?"

A rumbling chuckle, somewhat reminiscent of the roar of an avalanche, came from deep in General Wolfe's throat. "I'm glad there's one man in this crowd with his feet on the ground," he declared. "We can use a little common sense."

The entire crowd laughed with him. He turned to the gaunt scientist, Eberhardt. There was a gleam in his eye.

"And as for you, Professor," he boomed, shaking his riding crop for emphasis, "suppose you let *me* worry about any trouble that may come up. After all, Earth's government thought I was competent to bring this expedition back."

Lip curling in open contempt, Eberhardt leered up from the chair in which he sprawled. "Bring us back!" he jibed. "You don't think anyone gives a damn whether we come back or not, do you? Why'd they send us out here? To get rid of us!"

"That'll be enough, Eberhardt!"

The sallow scientist shook his head mockingly. "Oh, no, General. We need some case studies. Yours, for instance. Why are you here?" His arm swept out in an exaggerated gesture of introduction. "Look at him, gentlemen! General Hannibal Wolfe! Admittedly the greatest military genius in two centuries. Maybe more.

"Yet here he is, gentlemen! Riding on a fool's mission to Planetoid X—and *death!*" The savant's voice rose in a half-hysterical scream. His breath came in gusts. A mad light gleamed in his eyes.

Then his voice dropped to a dramatic whisper. "Why did he come? You know, gentlemen, and so do I. The international council doesn't trust the general. The council thinks he has dictatorial aspirations! Am I right, General?"

THE muscles in the military man's bull neck stood out with tension like great cables. He gripped the riding crop with both hands, and his knuckles were white. His face was bleak as a winter night. But he did not answer.

"His silence tells you where he stands!" Eberhardt cried. "And if you need any further evidence that this expedition is just a convenient way of getting rid of a few Earth undesirables too prominent to exile formally, take my own case." He laughed bitterly. "I'm booked as research director. In charge of all scientific work. But do I belong here? You know the answer! The human brain is my specialty; not wandering across half a universe after new fauna and flora."

A dark man with smoldering eyes interrupted: "Then why'd you come?"

The scientist laughed again. It was like the howl of the wind on a stormy night.

"I came like all the rest of you—because I was assigned the job on an 'either or' basis. And why was I assigned? Why, because I came too close to proving some unpleasant theories on the relationship between intelligence and heredity which would have necessitated the sterilization of certain of our beloved leaders!"

There was silence, then—the dead, heavy silence of men afraid or ashamed to speak.

Eberhardt broke it with another sneer. "Thanks for confirming my thesis, gentlemen!" he mocked. "I was right. Every man here was sent for cause." He glanced about the cabin from one to another. Not one could meet his gaze.

The scientist's eyes fastened on young Captain Whitman. "Even you!" he chuckled ghoulishly. "Not that you've done anything noteworthy. Oh, my, no! But your father—ah, that's something else!"

With one lithe motion Whit came to his feet. His strong young fingers knotted into fists. Feet spread wide, eyes narrowed and dangerous, he stared down at the gaunt scholar. The somberness had left him. Only blazing anger remained.

"Say anything you want to about me. But don't dirty my father's name with that filthy mouth of yours, Eberhardt. That's one thing I won't take."

"Such touching filial devotion! It should warm the great Colonel Whitman's heart in his traitor's grave—"

Snarling, Whit sprang.

Eberhardt moved faster. His feet

lashed out. They drove deep into the pit of the young officer's stomach. Whit doubled. Retched. The wind was knocked completely out of him.

"Look out!" screamed a voice. "He's got a ray-gun!"

STILL half-paralyzed, Whit forced his eyes to focus on the scientist. Eberhardt was out of his chair now, hunched forward in a killer's crouch. A maniacal light shone in his eyes. His forefinger was white against the ray-gun's trigger.

Staggering, the crippled officer pitched forward. To all intents he was out cold, falling unconscious to the cabin floor. He caught a glimpse of Eberhardt's hate-contorted face; of General Wolfe springing forward, riding crop in hand; of the others scrambling into the background, out of the way of the ray-gun's silent, deadly, invisible beam.

The officer pitched forward

Then, even as his knees touched the deck, his hands flashed upward. His fingers caught the scientist's wrist in a grip of desperation. His whole body twisted, jerking the other off balance and wringing the weapon from his hand. The world seemed to swirl about him, and there was a stinging in his side.

General Wolfe's bulk loomed above him and pulled him to his feet. Two crew members were dragging Eberhardt away.

"All right, Whitman?" came the general's gruff but anxious query.

The spinning in his brain was slowing now. He nodded weakly. "Yes, sir."

His superior's finger traced a course along the young officer's side. "Another inch to the left," he commented, "and I'd have needed a new aide." The finger came away smeared with red. "He nicked you!" And aside: "Get the doctor up here. This will need disinfecting."

Whit stared dully at the char-edged gash that vented his uniform coat. He swallowed hard, then bent over and picked up Eberhardt's ray-gun to cover the trembling of his hands.

The general slapped him heartily on the shoulder. "You're a lucky young man," he rumbled. "That was a mighty close call."

Whit nodded mutely. His eyes were focussed on the ray-gun's meter. No charge was registered.

This gun had not been loaded!

GENERAL WOLFE drained his breakfast cup of Venusian *sampana*.

"By three this afternoon we should be landing," he declared with an air of ponderous satisfaction. "Excellent time. Fine navigation."

His aide nodded agreement. "Yes, sir. Except for that one . . . er . . .

bit of unpleasantness . . . with Eberhardt, the trip's been perfect."

The other frowned until his shaggy eyebrows met to form a hairy "V" above his deep-set eyes. "Yes. Eberhardt. He's in irons, of course. Obviously stark, staring mad."

The younger man's eyes were moody. He laughed. It was not a pleasant sound. "Why try to fool ourselves?" he muttered. "Eberhardt knew what he was talking about. Every man on board this ship was sent for a reason. The international council would order a holiday if we didn't come back."

His superior shot him a sharp glance, then nodded slowly. "Yes, Whitman. None of us likes to admit it—but it's the truth. Maybe it's right, in part. Maybe Eberhardt shouldn't have let his scientific enthusiasm lead him into dangerous paths. Maybe I shouldn't have objected to seeing bungling, inefficient fools mess up the things I fought a lifetime to achieve." He sighed heavily. "At least, the international council felt strongly enough about it to send us off on this rainbow-chase."

His aide's eyes were smoldering. "And if we succeed, we've gained nothing. Someone will think of somewhere else to send us. Something else to keep us out of mischief."

The general picked up his riding crop from its place beside his chair. He thumped it idly into the palm of his hand.

"For you it's not fair," he said grimly. His voice was like the roll of distant thunder. "I've seen a lot of you this trip, Captain. I've come to know you, just as I knew your father in years gone by. And it's not fair to make you suffer for anything he did."

Lightning flashed in Whit's eyes. "That's just it! He didn't do anything. My father always was loyal to the international council. No one ever can make me believe he turned traitor in that uprising." He stopped abruptly, stared gloomily into the depths of his untouched cup of *sampana*.

Then, with a wry smile: "In fact, if I'd admit my father was a traitor and promise not to follow in his footsteps, the council would clear my record." He hesitated. "Or rather, they once would have. They've been getting pretty sore over my stubbornness. Now—"

HIS sentence went unfinished. The cabin door burst open. A uniformed crew member rushed in.

"General! Quick!" he gasped. "The commander—he wants you up in the control room!"

"What is it, man? What's wrong?" Despite his bulk, the general already was on his feet and moving toward the door.

The spaceman's face was the color of putty. Panic gleamed in his fear-widened eyes. With an effort he brought his voice under control.

"It's a ship, sir!" he reported tensely. "A space ship. It's closing in on our superlunary quarter."

"Come on!" thundered the general. Together he and Whit raced for the control room.

In the control room visi-screen they could see the other craft clearly. Now it was racing along parallel to the Earth ship's course. Gleaming black, it was much more slender than their own chrome-surfaced vessel.

"Queer-looking craft, eh, Captain?" the general muttered to his young aide. He eyed the black creation frowningly. "Fast, though."

"Apparently it's not built on the same principle as our ship, sir," Whit pointed out. "From the looks of it, I'd say it used some kind of atomic rockets instead of anti-gravitational beams."

"Atomic rockets!" General Wolfe snorted. "Why, those things wouldn't carry a ship to Earth and back."

His aide's forefinger traced a line across the visi-screen. "See it?" he quizzed. "The faint purple wake following that vessel, I mean. For my money, that's an atomic rocket wake."

"Your imagination's getting worse than Eberhardt's, Captain," growled his superior. He strode over to the ship's commander, who himself had taken the wheel in this hour of crisis. "Well, Commander, what's your verdict? You're an authority on all kinds of space ships."

The ship's officer did not answer. Did not even give any indication that he had heard the question. He continued to stare straight into the visi-screen, hands clenched on the spokes of the control wheel.

"Commander!"

No answer.

The chief mate, who had been standing in the background with a group of crew members, stepped forward and tugged at the commander's arm.

Still no response.

WHIT stepped in front of the wheelsman and stared into his eyes. After a moment he turned to the general.

"Look here, sir!" he urged. "His eyes are blank. Obviously he doesn't see me or anything else. It's almost like he was hypnotized." He glanced around at the visi-screen, a puzzled expression on his face. His eyes narrowed thoughtfully. "I wonder . . . could he have concentrated on that space ship's image in the screen until he actually hypnotized himself . . .?"

"Hypnotized or not, he's in no condition to be running this ship!" The general gestured to the mate. "Here, you! Can you handle the wheel?"

"Sure. That's what I was doin' 'til the skipper took over a little while back."

"Then take over now." The bulky military man planted himself squarely in front of the commander. Placing one massive hand on the spaceman's chest, he gave a terrific shove. The commander staggered backward, his hands torn loose from the wheel. Whit caught him before he could fall. The mate sprang forward to take over the piloting of the ship.

For an instant the commander lay limp, a dead weight against the young aide. Then life seemed to pour back through his limbs. He lurched to his feet, gripping his head with both hands as if his brain was awhirl with pain. There was a strange, dazed look in his eyes.

"What . . . what happened?" he muttered. "I—I can't seem to remember anything. I took over the wheel . . . then . . . everything is all blurred . . ."

Whit gripped the bewildered spaceman's arm encouragingly. "You just need some rest." He motioned a crew member forward. "Here, take the commander below. Better have the doctor check him; maybe give him a sedative." Wheeling, he crossed back to General Wolfe's side, close to the wheel and the visi-screen. "Everything all right now, sir?"

His superior's face was grim, his eyes bright with worry. He was staring at the mate.

Whit's eyes followed the general's. His face blanched.

The wheelsman's eyes had taken on that fixed, blank stare which had marked the commander but a moment before!

The general stepped forward. He prodded the mate savagely with the ever-present riding crop. "You!" he roared.

The mate did not answer.

GLOWERING, the burly fighting man turned back to his aide. Yet there was more than ill humor in his attitude. An undercurrent of tenseness seemed to have gripped him. It was as if an animate foreboding—a premonition of awful evil—was loose in the room. The young captain felt it, too. Even the crew members were pale. It hovered above everyone like a veritable sword of Damocles.

Suddenly the general broke the spell.

"We're prisoners!" he rumbled, stalking back and forth across the cabin, slapping viciously at his bootleg with his riding crop's loop. "Somehow, those devils out there in that other ship are able to seize our pilot's mind. We have to follow the course they chart for us. We'll just have to hope they're not scheduling us for a crash landing."

Whit licked dry lips with a tongue of cotton as the awful quiet again descended over them all. He recognized the feeling that gripped them—

Fear!

All morning they stood there, tense and grim and silent, while the mate piloted them closer and closer to the rocky surface of Planetoid X. And still the sinister black ship rode close beside them.

By noon they were entering the asteroid's thin atmosphere. The mate was maneuvering the giant ship toward its destination as skillfully as if he had brought it down here a thousand times before. Yet his eyes continued to stare straight forward into the visi-screen, blank and unseeing, while he remained oblivious to all that went on in the little room in which he stood.

Others of the expedition came in now, straining their eyes to catch every detail of this strange new world toward which they were hurtling. Already the black masses that marked great cities were perceptible.

Suddenly the wheelsman spoke. His voice was flat, jarring, emotionless: "Focus anti-gravitational beam and prepare for landing."

The spacemen at the various control boards made hasty adjustments. The ship's rush slowed perceptibly as the braking power of the beams began to take effect.

The mate spun the wheel and pulled it back. Slowly the cruiser leveled off from her headlong plunge. They were so near the ground they could make out scurrying figures in the city streets below them through the lower segment of the visi-screen.

"Down landing gear." The mate's words were as mechanical as a recording. No life showed in his eyes.

AHEAD of them loomed a monster landing field. Maneuvering the ship with consummate skill, their pilot set them down as gently as a milkweed seed dropped by a breeze. They landed close to the field's edge, almost in the shadow of a mass of grotesque and gigantic bushes, multi-hued as a fashion designer's nightmare. Beside them, the black—deceleration tubes belching violet fire—slid to a stop. Already strange, beetle-like vehicles were zipping toward them across the field.

"Open hatches!" the mate ordered curtly. A crew member moved to obey. Fresh air poured into the ship.

"Where . . . where am I?"

It was the mate. Intelligence had come back into his eyes. His voice was alive with panicky emotion. He gripped the wheel to stabilize his wobbling legs. Whit helped him to a seat.

"You're all right," the young officer explained. "You just brought us in to a perfect landing. Apparently the pilot of that ship cruising beside us took

control of your mind to guide us, just as you'd turn the landing problem over to the radio beam if you were approaching Earth."

A bellow from General Wolfe cut the conversation short.

"Captain Whitman! Get down here!"

The aide hurried toward the hatch. His superior was waiting for him. Outside the space ship a swarm of the beetle-like transport units had congregated. Their occupants were scrambling out of them.

"People!" gasped Whit.

The general chuckled. "Right, my boy! People! None of your slimy, six-legged Mercurians, either. Just plain, ordinary human beings who look for all the world like us."

Together they clambered to the ground. In the distance rose row on row of sleeky metallic black buildings. No windows were visible in any of them. Here, on this landing field, was room for hundreds of giant space ships. Great launching tubes, also of the black metal, protruded skyward far down at one end. The plants which edged the field in a saturnalia of color were unlike anything Earth ever had produced.

A dark-complexioned, middle-aged man with piercing eyes now stepped from one of the beetle-cars and hurried toward them, shoving his way roughly through the crowd of people who had gathered about the space ship. He wore what appeared to be a uniform, made of some glossy plastic. It was of a greenish tint. On his chest hung an object very similar to an Earth telephone operator's mouthpiece.

"By whose permission do you land on Zagor?"

It was a remarkable effect. The man was speaking into the mouthpiece in an obviously unfamiliar language. Yet, by some miracle of the device, his meaning was perfectly plain to all the assembled Earthmen.

But more important was the speaker's attitude. Every element of tone and mannerism bespoke arrogance.

General Wolfe snorted. He met the stranger's haughty gaze with an equally imperious stare.

"And who would need permission to land on this atom?" he demanded scornfully, speaking into a mouthpiece handed him by one of the Zagorians.

Anger flared in the other's eyes.

"Atom! You *zanths* will go to the pits! I, Vakarcs, swear it—!"

"Vakarcs!"

ATTENTION focussed on the man who spoke the abrupt command. He jumped hastily—yet, withal, with remarkable dignity—from the beetle-car in which he had just ridden up. Blue eyes blazed below a shock of silvery hair. Vakarcs fell back before his advance. But the white-haired man paid him no more heed.

"I am Casoda," he informed General Wolfe, smiling in friendly fashion. "As chief administrator for all Zagor, let me welcome your party."

The general bowed as low as his bulk would permit. "We are honored—"

"And please accept my apologies for General Vakarcs' actions," the white-haired man broke in. "He seems unable to learn that antagonisms and wars gain nothing. You may rest assured that our planet's high council will discipline him for his behavior." He leveled a cold glance of disapprobation at Vakarcs.

"It was nothing," boomed General Wolfe. "We would not have a high officer"—he nodded, pleasantly enough, to Vakarcs—"disciplined because of us."

"Unfortunately, this is not the first time such incidents have occurred,"

replied the white-haired Casoda. "However, we shall bear your wish for leniency in mind." Then: "But this is a foolish way to spend our time when there is so much to discuss. From what planet do you come?" He led the way toward one of the beetle-cars.

The general introduced his staff and explained why and from where they had come, then commented enthusiastically on what little he had seen of Planetoid X, or, as it was called here, Zagor.

"Your system of mind control interests me especially," he declared as he and the chief administrator, accompanied by Whit, climbed into one of the bug-like cars. "It gave us a perfect landing. How does it work?"

Casoda smiled. "It's rather complicated," he confessed. "General Vakarcs developed it. Perhaps he would be the best one to explain it to you." Leaning out of the vehicle, he called the still-fuming officer over.

"If it's complicated," chuckled General Wolfe, "maybe I should have some technical assistance, too." He turned to his aide. "Captain, will you please go on board and see how Eberhardt is? If he's calmed down sufficiently to be useful, get him out of the brig and bring him along."

The scientist's face twisted into its habitual sour sneer when he saw the young officer coming.

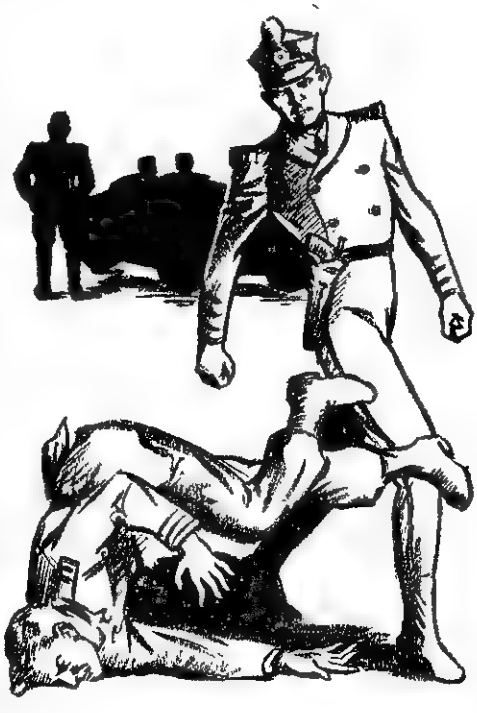
"My, but you're kind!" he mocked. "Taking me out for an airing already. Or is it just that I'm going to be 'shot while attempting to escape'?"

Whit's lips set in a thin, irritated line. "You're a fine one to be talking about shooting!" he snapped. "You'd better remember that I don't have to take you out unless I think you're going to behave yourself." He jerked open the brig's narrow door. "Come on! That mud-colored face of yours can use some sunlight." He half-dragged the protesting Eberhardt to the outside hatch.

THE majority of the crowd—Earthmen and Zagorians alike—already had departed. Only Casoda, Vakarcs, General Wolfe, and a couple of guards remained. The general, thumping on his bootleg with his riding crop, stood talking to Casoda beside the car in which they were to leave. Vakarcs sulked close beside the Earthmen's space ship.

"Hurry up, hurry up!" General Wolfe roared, waving the crop irritatedly. "We haven't got all day, Captain!"

Grumbling under his breath, Whit jerked Eberhardt along a little faster. They were nearly abreast Vakarcs. Eberhardt muttered something. The young captain glanced up.



Whit fell flat on his face

A strange light shone in the scientist's eyes. He seemed to be staring straight at General Wolfe. His gaunt face contorted in a grimace that might have been hate or fear or rage. Then, with a sudden twist, he jerked free from Whit's grip. The next instant he was lunging madly across the landing field.

Surprise stunned the young officer for a moment. He gaped open-mouthed at the fleeing savant. Then he exploded into action. He jumped after Eberhardt. Jumped, and fell flat on his face, his feet jerked from under him by the skillful twist of a polished boot-toe. By the time he scrambled erect again, the scientist was disappearing into a clump of the multi-hued brush that fringed the field. Vakarcs, close at hand, was laughing stridently.

Breathing h a r d, the Earthman reached him in two strides. "You tripped me!" he accused, trying hard to control his temper.

Instantly the other's face went cold. "You insolent *pandor!* You stumbled over your own big feet."

There was an instant when Whit's fist instinctively clenched to wipe the dark-faced Zagorian's smirk away. But the realization of the Earthmen's mission—establishment of peace and friendly relations between the two planets—caught him and held him back. He swallowed his anger and turned on his heel.

Casoda and General Wolfe panted up.

"Captain Whitman!" raged the general. "Why'd you let that prisoner get away? What's wrong with you?"

Vakarcs answered before Whit could open his mouth.

"Your aide proved as clumsy as he is insolent," he commented in a vinegary tone. "He let the man get away, then had the effrontery to accuse me of tripping him." He laughed caustically. "No doubt he comes from a long line of liars and bunglers. Probably his father—"

IT WAS too much. Most indignities Whit would bear in silence, but not this insult. He sprang at the Zagorian. His right fist lashed out in a sledge-hammer blow. It crashed into the haughty general's mouth. Broken teeth spattered over the ground like hailstones.

The young Earthman's left hand caught his adversary by the throat. "No one talks about my father!" he grated savagely. "No one, do you understand?" He shook the trembling general as a terrier shakes a rat.

Caught between his badly-gashed mouth and his fury, Vakarcs could hardly speak.

"You struck me!" he choked at last, as if he still could not believe it. "You struck me!" And then: "Well, you *azovis,* you'll regret it! You and your whole planet! Your people shall curse the day you were born—!" His voice was a raging, hysterical scream.

"Vakarcs!" the commanding voice of Casoda broke in. "Vakarcs, come with me!" He led the still-muttering Zagorian away, leaving Whit with General Wolfe.

The young Earth officer shifted his feet uneasily. "I guess I made a mess of things, sir," he confessed nervously at last.

The general nodded grimly. "You certainly did, Captain," he growled irritably. "Not that I blame you too much. I saw him trip you. That in itself was enough to warrant hitting him under most circumstances. But after all, Whitman, we're on a peace mission!"

His aide nodded miserably.

"The thing that worries me," the

general went on, "is the antagonism between General Vakarcs and this Casoda fellow. Right now Casoda's on top. But Vakarcs is a soldier and a dangerous man. Some day—"

"I understand, sir. Some day he may hold power. And then he'll be in a position to do something about this antagonism."

"Right." A pause. "Captain, I think you'd better stay here for the rest of the afternoon at least. I'll see if I can't get Vakarcs off by himself and calm him down. After all, two old soldiers should have a lot in common. And no doubt he's proud of this mind control mechanism he's developed. A little flattery along that line won't hurt."

"Yes, sir . . . And Eberhardt . . . ?"

"Don't worry too much about him. Casoda tells me this planet has a terrifically thick population. Since everyone speaks the same language and Eberhardt hasn't a translator mouthpiece, he's sure to be recognized and picked up in short order." He gestured toward the space ship with his riding crop. "Now get aboard," he commanded, "and don't leave 'til I get back!"

The young officer hesitated.

"Well?"

"Well, sir . . . it's just—what if you can't settle things with Vakarcs. What if he somehow got power . . . ?"

General Wolfe's face lined with worry. His broad shoulders momentarily slumped as if the weight of the world literally rested upon them. When he spoke the clamor and belligerence for once had left his voice.

"In that case, Captain," he said slowly, "we all shall pay the penalty for having come to this asteroid, and" —his arm swept out in a gesture that took in the monster landing field and the giant launching tubes that rose in the distance—"may God have pity on Earth!"

THE girl paused, for an instant, at the top of the great stairway leading down into the vast, brilliantly illuminated ballroom. Here Zagor's magnificos and their ladies tonight were gathered to honor the newly-arrived visitors from Earth. Her eyes combed the throng, while one slender hand moved in unconscious grace to smooth the shimmering wave of blue-black hair which swept down to her shoulders.

She was, Whit knew instantly, the most devastatingly beautiful creature he had ever seen. The metallic cloth of her snugly-fitted gown accentuated the shapeliness of her youthfully curvesome body as breathtakingly as the rippling jet hair framed the delicate oval of her perfect-featured face.

As if drawn by a magnet, the young Earthman moved toward her, heedless to the crowd around him.

The girl turned slowly, searching the sea of faces. Suddenly, then, her eyes met his. Ever so briefly Whit stood as if paralyzed by a bolt of lightning. He found himself thinking, somehow, that those dark eyes clinging to his own were like cool forest pools gleaming in the night. Then a little smile of welcome was touching the ripe lips and warming the lovely face, and the girl was moving down the stairway to greet him.

Whit spoke to her through the strange translator-mouthpiece each of the visitors had been given.

A sudden wave of embarrassment struck him. "Captain Farnsworth Whitman, United World Armies, at your service, Miss," he murmured, seeking to cover it with formality.

The girl's smile spread, and a little spark of merriment glistened deep in her dark eyes. "I am Mirana," she

told him, "and I'm pleased to have such a handsome young man at my service. There are so many things I can think of for him to do!"

Whit laughed with her, his uneasiness dispelled. The pensive shadow almost left his brown eyes. "What's my first job?" he demanded with mock anxiety.

Mirana took his arm. "First you must tell me of your trip here," she commanded, leading him through the crowd to a doorway opening onto a broad terrace. "How you happened to come to Zagor. What you expected to find here. How long we may expect you to stay. What your planet is like—"

"Hold on, there!" Whit pleaded, grinning in spite of himself. "If I go into all that, we'll still be talking here tomorrow morning."

The girl raised an eyebrow. "Is that such a penalty?" she jibed. And, laughing as the Earthman flushed: "But tell me, at least, how you made that long voyage through space." She sat down on a conveniently-placed bench and motioned the young officer to a spot beside her.

DESCRIBING the Earth ships and how they worked, Whit outlined the trip's main events while Mirana listened wide-eyed.

"Our ships would never dare try such a feat!" she exclaimed. "They could make the trip to your planet without difficulty, yes. But then they would have to land and refuel. And if they weren't sure you had the materials they needed, it would be too great a risk."

"Yes," nodded Whit, "the anti-gravitational ray is a big advance over rockets." He broke off the topic. "Now how about telling me something of your way of life?"

Zagor's civilization, the Earthman learned, was based largely on electricity. The thousands of swift-running streams which dashed across the rocky terrain provided such a tremendous source of energy that for hundreds of years these people had been content to forget other means of power. Even the relatively recent development of atomic energy had not changed this to any extent, for the bother of changing over had limited its acceptance to new construction. Many of their appliances were quite similar to early Earth equipment—lights, heating devices, and motors, for example.

In other directions, their inventive talents had moved rather differently. The beetle-like cars, as a case in point, used electric power, but drew it from a central power house by means of a special wireless transmitter. And while this had been done experimentally on Earth, it never had been perfected to the point of being commercially practicable. Their medical science, after mastering practically all human ills, had turned to an intensive study of the mind and nervous system, ultimately resulting in General Vakarcs' mind control device.

Of weapons they had few. War had been outlawed from their planet long before the explosion of their sun hurled them into Earth's orbit. Their powerful space ship fleet—used for visiting nearby asteroids—was equipped with gigantic atomic disintegrators, at the insistence of General Vakarcs, but these were useless save at relatively short ranges. Small arms were miniatures of these disintegrators. They were especially dangerous because the line of energy which they fired completely destroyed anything in its path and within its range. For this reason the weapons were carefully kept out of reach of all but the few military officials.

Whit ran his fingers through his thick

brown hair in puzzlement when he heard of the military situation. "It doesn't make sense, Mirana," he protested. "Why do you have arms if you haven't had wars in so long?"

The girl nodded. "It does seem silly, doesn't it?" she agreed. "Mostly, it's because of General Vakarcs. Most people look on him as an atavar—a throwback to a more primitive period. Few people like him, and almost everyone distrusts him, but he's so obviously brilliant and somehow has acquired such influence that he's been allowed to rearm our planet."

"I agree with the majority," Whit commented with a lightness he didn't feel. "I mistrust him, too." A pause. "And now that we've discussed civilization in general: how about you? Just who are you, anyhow, aside from being named Mirana?"

MIRANA laughed softly. "You already know my father," she told him. "He watched you knock out most of General Vakarcs' front teeth this afternoon. Casoda. Remember?"

"Yes. Sure. A very friendly white-haired gentleman who seemed to be quite a big-shot. Just what does he do?"

The girl shot him an amused glance. "He directs," she explained. "Here people are assigned to work according to their abilities, as determined through all kinds of tests and training from the time they're children. My father's work happens to be the coordination of all Zagor."

Whit whistled softly. "In other words, you're the equivalent of what on Earth would be the president's daughter?"

"Yes. Aren't you frightened?"

And again they both laughed.

"Now tell me about your family," Mirana probed brightly. "Your father, to begin. What does he do?"

The young officer's cheer and buoyancy vanished before her eyes. That habitual haunted look which marked him was returned. His eyes grew somber.

"My father's dead," he said in a frigid voice, looking away.

Mirana's tone was tender. "I'm sorry, Whit." He felt her hand touch his arm. And then, because she saw she had touched something better left let lie: "Let's go inside now. There are so many people here you should meet!"

There were hours more. Hours of forgetting one's father lay in a traitor's grave. Hours of chatting and laughing and becoming better acquainted. Hours of dancing, with Mirana very close and relaxed in his arms. Hours of realizing that half a universe isn't much distance where human emotions are concerned. And, finally, there was a last walk in the garden, where it was very quiet and lonely and the only light was the rainbow glow of electric decorative effects far across the great city.

"I can take you home?"

"I'm sorry, Whit. But not this time. Father would feel hurt if I didn't go with him, since he brought me."

They paused, deep in the shadows of a gigantic purple bush that towered black against the sky.

"Maybe we'd better say 'good night' here," Mirana whispered. She nestled in the curve of the young captain's arm, lovely face uptilted to his. A heady perfume seemed to fill the air. She came willingly when Whit pulled her to him. And her arms held him as firmly as his gripped her while they kissed.

A chill voice said: "A very touching scene!"

THE startled pair whirled. The tall figure of General Vakarcs emerged from the shadows, face alive with

"A very touching scene!"

hatred. He spoke to the young Earthman:

"Ordering your execution will be a double pleasure. Your blow this afternoon was enough to warrant your death. And now—I find you with the only woman on all Zagor who ever held my eye!"

Wordlessly, the Earth officer started forward, fists clenched, eyes blazing.

The Zagorian general laughed harshly. His hand moved in a gesture of command. Black figures burst from the shadowy bushes. Like wolves they lunged toward Whit.

Snarling, their prey leaped back. His fists flashed in a flurry of blows as he met the foremost attacker. For a moment the fellow grappled with him. Then a solid right connected. The Zagorian's head snapped back. Knees buckling, he crumpled.

But others closed in. Hands clutched at Whit, stifling his shouts; blows stunned him; the force of numbers bore him down. He caught a vague glimpse of Mirana, too, struggling against odds —and losing. Then he went down . . .

The room in which he recovered consciousness was bare and grimy. A lone bulb with *polunel* filament gave uncertain light. Waves of pain swept over him. At first his neck—apparently wrenched in the scuffle—hurt so that he could not even muster the energy to turn away from the ugly vista of dingy grey wall that swam before his eyes.

Mirana's voice, aquiver with anger, impinged on his consciousness: "The high council will break you for this, General Vakarcs!" she cried passionately.

Whit brought his head around. The girl stood beside him, her arms firm in the grip of a burly soldier. Her body was tense, her small fists clenched. Dark-faced, Vakarcs stood before her, mocking her with his laughter.

"In another day," he jeered, "there'll be no high council. Zagor will be mine to rule, as it should have been years ago. And you—well, I've plans for you, too, little one!" His hand speared out in an obscene caress that brought a scream of fear and loathing to Mirana's lips.

Somehow Whit lurched to his knees. He clutched blindly for the traitor. But he was too slow, too weak. Vakarcs' foot lashed out. The boot caught the Earthman high on the cheek. He sprawled backward, hanging again on the verge of unconsciousness. As from afar he heard the other's gloating laughter.

"You're mad!" Mirana choked. "What chance have the handful of fanatics who might follow you? Most of our little army is loyal to the high council. Can't you see—?"

Vakarcs' eyes were like hot coals. "The high council's army won't march against me," he rasped. "You little fool, did you think I ran the risk of seizing you just because I wanted you for a plaything for a little while? No, by *Scanol!* I know your precious fa-

ther! He'd fight me 'til the sun went black. But with you in danger, he'll sacrifice himself and the council and the planet itself if he thinks it might save you!"

WHEELING, he snarled a command to another of his henchmen. The man caught Whit beneath the arms and hauled him to his feet. Vakarcs, dark face aglow with triumph, stood in front of the young Earthman.

"In case you've any notions of escape, you *azovis*, you can forget them. See!" -he swept the windowless room with a gesture—"There's no way out except the door." His eyes danced with unholy glee. "It's quite a door, too. It has a magnetic lock such as we use on Zagor. Not like your planet, where your superior tells me you have simple locks which can be picked." He paced the floor for a few seconds, as if enjoying the helpless hatred in the captive's eyes.

"Beyond the door is a guard," he went on. "He has orders to kill you if you make any disturbance." A pause. "Not that a disturbance would do you any good. This is my private estate, and you could howl your head off without anyone paying you heed."

"So why do you bother telling me all this?"

"Why?" Vakarcs leered. "Because I want you to appreciate the quiet party this pretty thing"—he gestured toward Mirana—"and I are having within a few yards of you, you *zanth!* Besides, I wouldn't want anything to happen to you. There are too many things you can tell me about Earth weapons."

With a snarl of futile rage the young officer tried to throw himself on the Zagorian, but the grip of the man behind him was too strong. Vakarcs grinned wolfishly and snapped an order. The fellow hurled the Earthman hard against the wall, slamming the strength out of him. Whit slid helplessly to the floor.

Afterward it always seemed to Whit that he must have lain there helpless for hours. Actually, it could not have been more than a few minutes.

On his feet at last, he staggered to the door. It was heavy and solid. He tugged at the knob without avail; the portal would not budge.

The specter of Mirana's lovely, terror-distorted face hung before his eyes to haunt him. He visualized her now, at Vakarcs' mercy, somewhere in this building, while he stood here helpless. A sound came from his throat, half scream, half sob. Again and again he hurled himself at the door; beat it with his fists; broke his nails on its panels. But to no avail.

He lurched from one end of the bare room to the other, searching frantically for some weapon, some means by which he might escape.

There was none.

He went through his pockets a dozen times, praying that his captors had somehow missed his knife.

They had left nothing but a few small Earth coins, valueless here.

The glare of the lone bulb hurt his eyes and worsened his headache. He threw himself to the floor in an agony of hopelessness. There was no way out.

And then it came to him: *Lights. Electric lights.*

HE SPRANG to his feet, new life flooding through his body. It wasn't much of a chance. But anything was worth trying now.

He examined the bulb. Its base was smooth instead of threaded, and wire springs held it in its socket. Otherwise it was practically the same as the Earth bulbs he could remember vaguely from his childhood, back before the Starbin

ray replaced electric lights. He removed it from the socket.

"Unless this room was designed for keeping prisoners—and it doesn't look like it was—, this should work!" he muttered half-aloud. He paused, next, to sit down and take off his boots.

Carefully, to avoid a shock, he balanced a copper coin at the outer edge of the light socket. Then, with the aid of the bulb, he shoved it all the way in.

There was a terrific flash, and the bulb made a popping noise. Then darkness, utter and complete.

Snatching up one of his boots, the Earthman raced across the room to the door. Again he tugged at the knob.

This time the door opened!

He chuckled grimly beneath his breath. "Magnetic locks!" he snorted. "Fine business, but when you short-circuit the electrical system and blow a fuse, the bolt snaps back."

The corridor was as dark as the room. Poised and silent, Whit stood listening. He caught the sound of a man's heavy breathing close at hand.

Cat-like, the Earthman moved forward, boot raised high. His left hand explored ahead of him. Suddenly the fingers touched the unmistakable smoothness of a Zagorian plastic uniform.

From the other came a startled gasp. Whit didn't hesitate. He brought the boot down with all his might. His aim was good. He heard the dull *thwack* of the heel colliding violently with a human skull. The guard's limp body crumpled against him.

The Earthman's fingers probed the body in frantic search. In a belt holster he found what appeared to be a heavy pistol. Hastily shoving it into the waistband of his own trousers, he jerked on his boots, then hurried down the corridor.

From somewhere below came echoing the faintest of screams. Whit stopped short. Mirana! Whipping out the pistol, he lunged ahead, heedless of the danger.

Suddenly a light gleamed distantly. The Earthman hurried toward it. He found himself at the head of a flight of stairs. Below were grouped half a dozen Zagorians. One of their number gripped a big electric torch. They were jabbering excitedly to one another, but they were not using the translator mouthpieces, so the young officer could not understand them.

Even as he stood there, the scream came again.

CLINGING to the shadows, Whit raced down the stairs, praying Vakarcs' henchman would not spot him too soon. But just as he passed the landing someone caught the flicker of motion. There was a chorus of wild yells. The group lunged for the stairway.

The Earthman moved like a taut spring let go. He vaulted the rail, landing between the Zagorians and the area from which the scream had come. Spraddle-legged and snarling, he took his stand. His finger tightened on the disintegrator's trigger. A thin line of purple light spurted forth. The foremost Zagorian stopped in mid-stride. A gaping hole yawned where his chest had been. A man behind him, too, toppled to the floor. And at the far end of the room a massive chair crumbled to ashes as the deadly beam touched it. The rest of the group fled as if he were close on their heels.

Whit whirled. Now for Mirana!

Even as he turned he saw Vakarcs' dark face, framed against a half-opened door. A disintegrator was in his hand, too. Purple light darted from it as the young officer sprang aside. It missed him by a scant two inches.

Then Vakarcs lurched through the doorway. Before he could recover Whit was upon him, smashing at his face with the distintegrator barrel, venting his fury with every savage blow.

"Look out! Behind you!"

Mirana's voice! The Earthman spun like an automaton. Vakarcs' men were back. They charged toward him.

Whit jumped backward into the room from which the Zagorian general had come. Slamming the door shut, he gripped the arm of a heavy divan and dragged it across the threshold as a further bar.

Mirana stood close beside him. Her face was bruised and her hair was dishevelled and her gown had been ripped nearly away. She clutched the garment to her, and flushed as she realized how little it now concealed. Whit's eyes moved away to take in the room. It was in utter disorder. Vases were broken. Chairs were overturned.

"Did he . . .?"

Mutely she shook her head. Suddenly, then, she was crying, sobbing out all the pent-up hysteria of that awful night. The Earthman pulled her to him; held her in his arms and comforted her.

"You pushed him when he shot?" he queried at last.

Another nod.

"You saved my life," he said slowly. "A few inches over and I'd have been a dead man."

"I'm . . . I'm glad . . . so glad."

VAKARCS' voice, somewhat muffled, came from outside the door: "You might as well open that door, you *pandors!* You're trapped now. You can't get out."

A shiver ran through Mirana's slender form. Terror lighted her eyes again. "Whit—!"

"Which of these is the outside wall?"

"Over there. Across the room."

The young officer glanced down at the big disintegrator pistol still gripped in his hand. A wry grin twisted his lips. "I hope this thing is as good as it's supposed to be," he commented. "We sure need a window."

"Window?"

"A hole in the side of a building to let in light and air. How come you don't have 'em here in Zagor?"

"We did, hundreds of years ago. But during the long passage through the void after our sun exploded, there wasn't any need, because it was completely dark almost all the time. Our planet already had an efficient air and lighting system, so they quit putting in the 'windows'."

"So that's it . . . Well, here goes—!"

He pulled back the pistol's trigger. Again that deadly line of purple light shot forth. Whit concentrated it low on the wall. For seconds nothing happened. Then, with a hiss of inrushing air, the side gave way. A great hole gaped to the outdoors.

"All right! Blast the fools!"

It was Vakarc's voice, crawling with hatred. Whit caught Mirana by the wrist shoved her hastily through the hole. A moment later he, too, was outside. Behind them, a purple hue began to tinge the door as disintegrators were concentrated on it.

The Earthman pulled Mirana into the shadow of a convenient clump of bushes. "Where now?" he whispered.

A little shiver rippled through the girl's thinly clad figure. "I don't know," she whispered back. "There are high, charged fences all around this estate. And with guards at the gates . . . I'm afraid we'll never get out . . ."

HUGGING the shadows, the young officer hurried Mirana on around the big house. "We've got to do some-

thing and do it fast," he explained. "In a minute those fellows will find we're on our way. They'll start searching for us. We can't afford to be here when that happens."

"Get ready to run . . ."

They were in front of the gates now. Burly men stood on guard, pacing warily up and down with drawn disintegrators in their hands.

"We'll have to try a blast-out!" Whit whispered. He raised his pistol. "Get ready to run when I do!"

The girl squeezed his hand in silent confirmation. Tensely, he tightened his forefinger on the trigger.

A dim purple glow that faded almost immediately into a shower of sparks was the only response.

"Empty!"

Behind them came shouts heralding the discovery of their flight. The Earthman bit his lip until the blood ran. Mirana's eyes were bright with fear.

"We'll have to see if there's another way out. Come on! On around the the house!"

They stumbled blindly ahead. The shouts of pursuit grew louder as the searchers neared.

Before them loomed the black forms of half a dozen of the bug-like cars. Whit clambered hastily through between two of them, dragging Mirana with him. Then, suddenly, he stopped.

"What is it, Whit?"

The Earthman did not halt to answer. He already was jerking open the door of the first car. Then: "How do you start one of these things?"

"Here, I'll show you." The girl made hasty adjustments and the murmur of a powerful motor became barely audible.

"What keeps it running?"

"This lever here. If you press it down any farther the car starts moving."

The young officer sighted hastily. The vehicle was aimed dead center at the gates. With frantic speed he jammed the lever to the floor, wedging it down with the now-useless disintegrator. Already the car was gaining speed, plunging head-on for the great gates. The Earthman flung himself clear, scrambled to his feet, and raced back toward Mirana. Grabbing her arm, he shoved her into the second car and turned on the motor.

The first car roared straight for the gates, though edging slowly over on the road. The guards' startled cries of surprise echoed through the still night air. They fell over themselves in their efforts to escape the oncoming juggernaut.

WITH the crash of an avalanche breaking loose the driverless car

hurtled into one side of the great double gates. There was a high-pitched snapping of metal bars as they gave way. The wrecked car spun over on its side. Smoke belched from its engine compartment.

"Here we go!" Whit's foot jammed down the acceleration lever. They blazed straight for the shattered gate. The Earthman caught a momentary glimpse of a purple disintegrator beam. He breathed a mental prayer to the fighting gods who preside over brave men's destinies. The next instant they were through the gap and hurtling down a narrow road.

"Right at the next corner," Mirana directed. "There's a council police unit stationed down that way. They'll take care of everything."

Within minutes Zagor's authorities were in action. Men—trusted, loyal, well-equipped -swooped down on General Vakarcs and his henchmen. Half an hour later a stream of prisoners was pouring in. Casoda gripped Whit's hand. There were tears in his blue eyes.

"Zagor never can repay you, Captain!" he declared huskily. "And I" —he stole a fond glance at Mirana—"I am in your debt forever." He straightened. "I must go now. There still is much work to be done." He hurried from the room.

His daughter came close to the young Earthman. "Why are you so sober?" she murmured.

He raised his eyes to hers. "I don't know," he confessed. "It's just that something seems wrong. I feel as if this was the beginning, instead of the ending. As if the trouble was just starting."

Mirana smiled. "Perhaps something *is* just beginning," she murmured. "After all, we are young . . . and I would like to learn more about this 'kissing' with which we said good night . . ."

The Earthman chuckled. "When you look at me like that, I'd make you a present of my soul!" he told her. "Remind me to preserve you for posterity with my movie camera before I leave for Earth." His arms closed about her willing body.

But before his lips could touch hers, the door burst open. It was Casoda. His face was lined with worry, and there was a tremor in his voice when he spoke:

"General Vakarcs has disappeared!"

THERE was pain in Whit's eyes as he marched into General Wolfe's quarters on the homeward-bound space ship. His superior nodded cordially.

"Morning, Captain. Well, we're headed back to Earth at last." He extricated his big carcass from the mass of Zagorian electrical equipment on which he was working and motioned the younger man to a chair. "Those Zaggies certainly have done some interesting things with electricity," he commented, gesturing to the complicated tangle. "Take this thing, for instance—a gadget for transferring objects from one place to another by breaking down the original atomic structure. You proceed to project the molecular pattern along a radio beam to where you want the object sent and it's recreated there. Still in the experimental stage, of course. But how it fascinates me!" He broke off and let his bulk into a chair with a sigh. His eyes probed Whit's face, caught the note of tension. "Well, what's on your mind?"

The young captain swallowed miserably. "Why'd you do it, sir?" he blurted.

"'Do it'? Do what?"

"Why'd you help Mirana to stow

away on board? I knew she couldn't have done it without help. One of the men finally broke down and told me you'd given orders to let her come, but not to let her know it."

The general gave vent to his customary rumbling chuckle. "Why, Captain! I thought you liked the girl." He closed one eye in a wink so broad the shaggy eyebrow seemed in imminent danger of colliding with his nose. "In fact, I gathered that 'like' was a pretty weak word for your feelings."

A paroxysm of agony contorted the other's face. "My God, General!" he flared. "You know where I stand. The international council won't ever let me live a normal life. Because they think my father was a traitor, they'll never trust me. They'll hound me from planet to planet. Send me on one mad mission after another. Assign me to suicide jobs. And the day I refuse to take an assignment, they'll claim it's sabotage and exile me. They'll keep *after me 'til finally I'm killed. Or 'til* I crack up—go mad, like Eberhardt did, and disappear on some God-forsaken asteroid in outer space.

"Do you think I'd condemn Mirana to a life like that: seeing me for a couple of days; then having me gone for a couple of years?" His tongue was a whip-lash of scorn, his eyes live coals. "Can you believe I'd subject the girl I love more than I do life itself to that kind of existence—?"

"Stop it!" thundered the general.

THE young captain halted in mid-breath, his semi-hysteria cut short. His superior erupted from his chair and stalked up and down the room. The riding crop, which he snatched from a table, beat a furious tattoo against his bootlegs. At last he stopped in front of his aide.

"Whitman," he said, "don't think I don't know how you feel." His face had a bitter twist. "For years, now, those have been my own sentiments." He laughed harshly.

"However, I hoped you'd be too much in love to pay any heed to logic and common sense. I hoped you'd marry that girl and make her as happy as you could. Since you won't, I'll have to tell you the truth."

"The truth—?"

"Yes. The truth." A moment's hesitation. "I didn't help that girl to get on board because of you, or how she might feel about you, Captain."

"What!"

"I brought her on board for as cold and unscrupulous a reason as ever a hard-hearted soldier had. I brought her for a hostage!"

Mute amazement flooded the young Earthman's face. His superior resumed his pacing up and down.

"It's a foreboding," he grumbled. "Illogical—I admit it. But they never found Vakarcs, and Vakarcs is as dangerous a man as you'll find in the length and breadth of the solar system. Some day, he'll reappear.

"But he won't reappear as a prisoner. Not unless my judgment is slipping. I spent that first afternoon after we landed alone with him, and I've never seen a man with a better military brain."

"And how do you expect him to come back, sir?"

The general's riding crop came down in a savage saber slash. "As a conqueror, Captain!" he thundered. "As the man who climbed from oblivion to the dictatorship of Zagor! That's how he'll come back."

"Mirana . . ."

"That girl is our ace in the hole, Whitman. Vakarcs' weak point, if he has one, is his vanity." The bulky military man frowned until his bushy

eyebrows met. His deep-set eyes stabbed at the younger man.

"You touched that weak point, Captain. You checkmated him on every front. Most important of all, you moved in and took the woman he never could get.

"That hurt. Vakarcs won't forget it. When he gains power—and I'm confident he will—he'll come hunting you, with every space ship Zagor can muster."

Whit's face was pale. His knuckles were white as he gripped the arms of his chair. But he said nothing.

Relentlessly, General Wolfe continued. "That's where this girl, Mirana, comes in. Possessing her, by violence or otherwise, will mean more to Vakarcs than anything else in the universe. As long as we hold her, I believe we can dictate our own terms."

THE other frowned. He endeavored to look at the situation coldly and logically. "I don't get it," he declared at last. "You act as if Vakarcs could swoop down and wipe out Earth without a fight. Yet their atomic disintegrators have too short a range to be dangerous to our defenses."

The look that passed over his superior's face was indefinable. Whit tried to analyze the emotions behind it. He failed.

"Defenses," asserted General Wolfe, "are like prisons. Both can be broken!"

The door swung open. Both general and aide looked around. The commander stood in the entryway. There was a worried frown on his face.

"Sorry to disturb you, General," he apologized, "but something unusual's happening on Zagor. You'd better come take a look."

The burly military man hurried after the space ship's officer, his aide close at his heels. Minutes later they were peering over an observer's shoulder at the rear visi-screen. Zagor, fast receding, looked like a large marble down in one corner.

"Well?" barked General Wolfe. "What is it?"

The observer began twisting a dial. "Have to get the magnification up," he explained. As he turned the knob the planet they had left less than 24 hours before grew on the screen, swelling until it obscured everything else. The

"Full speed ahead!" barked the commander

rocky ridges of the asteroid began to stand out. The blotches that marked the strange, metallic cities became discernible. The observer pulled a needle-pointed stylus from his pocket.

"See?" he queried, indicating certain almost indistinguishable dots with the stylus.

"Space ships!" Whit ejaculated.

The observer nodded. "Right. They've been taking off all morning, one flight after another. Seems almost like they were following us."

The general's deep-set eyes flashed fire. "Vakarcs must have struck al-

ready!" he exclaimed. "I had a hunch it was time for us to get out of there." He wheeled on the commander. "Full speed ahead! From here on this is a race, to see whether we can reach Earth before those devils do. Get going!"

The commander headed for the door.

The general turned to his aide. "Now, Captain, you can see why I wanted a hostage. When war's been your trade as long as it has mine, you'll be able to sense trouble, too."

THEY haunted the visi-screen in the nerve-racking days and nights that followed. Despite the commander's best efforts, the Zagorian space fleet unmistakably was gaining on them, even though slowly.

"They'll reach Earth not more than 12 hours after we do," General Wolfe muttered savagely. "Maybe it will be as little as six."

His aide shook his head in bewilderment. "It doesn't seem possible," he said dazedly. "After all, Zagor hasn't known war in centuries. Vakarcs was looked on as a throw-back. Mirana says almost everyone on the planetoid is horrified at the idea of violence."

The general paced the floor, bulky and belligerent. "But they're coming, aren't they?" he roared. "Can you think of any other reason why every space ship on that damned asteroid should suddenly decide to take off for Earth, unless they were bent on trouble?"

Then came the morning that found them hurtling Earthward, anti-gravitational beams set for a fast landing.

"Eight hours!" the general stormed. "Eight hours to prepare for the most stupendous invasion attempt Earth has ever known!" He glared into the visi-screen at the swarm of dots streaking through space close behind them. "Damn those atomic rockets!" he raved. "Because their range is limited, we called them inefficient!" The muscles of his bull neck swelled with fury. Pale-faced and worried, his aide shifted from one foot to the other.

They came in so fast that the landing gear was almost torn off. Already the international council's speediest dispatch carrier was waiting for them. Four minutes after their space ship had landed, the bullet-shaped aerial taxi had them in the council's nearby chambers. The council, pre-warned by visiphone of the situation's seriousness, already was in session.

Tersely General Wolfe reported on all that had happened.

The grey-haired president of the council rose. His words were clipped and angry.

"General Wolfe, you have failed in your mission!" He glanced around the great council table to his colleagues. Other members nodded their affirmation of his statement.

"You were sent to make peace with Planetoid X—or, as you now term it, Zagor. We of the council cannot help but feel that there is a reason for this failure. While we have every desire to be fair with you, it is natural that we should wonder whether or not your own attitude has had something to do with the situation which now arises."

More nods.

"As you know, your opposition to democracy, your tacit support of dictatorship—"

THE general was on his feet, face flaming. "I protest against this Star Chamber proceedings! I'm not on trial here—!"

"Sit down!" A pause while the burly militarist resumed his chair. "The things I mentioned long ago made you suspected by this body. Under such circumstances, we are forced to

suspend you from your post of military command until a thorough investigation can be made." The grey-haired council president glanced around the room. His gaze rested on another man in uniform.

"General Breckinridge!"

The man indicated rose and saluted.

"Until further notice, you are in complete command of Earth's forces. You will exercise these powers as you see fit, to repel the invasion attempt now reported under way from Planetoid X." He brought down his gavel. "Meeting adjourned!"

General Wolfe again sprang to his feet. "Does this mean I'm in custody?" he demanded angrily.

The eyes of the council president and General Breckinridge met. Then the president shook his head. "For now, no," he said. "Please do not attempt to leave this area, however."

The meeting broke up. Whit walked out beside his superior. His own eyes were blazing.

"Fairness!" he exploded. "Democracy! They name my father a traitor on hearsay evidence. And now they do this to you!"

The general's paw-like hand gripped his arm. "That's our international council for you, Captain." And then: "If you don't mind, Whitman, I'd like to be alone. I'm not in a very sociable mood today."

There was a bitter smile on his face as he stalked heavily away, his riding crop thumping against his bootleg like the beat of a tribal drum.

General Breckinridge hurried up to the young captain. He was his successor's antithesis. Where Wolfe blustered, Breckinridge was quiet. The one was heavily built, powerfully muscled; the other, slender and wiry.

"Captain Whitman, General Wolfe brought a Zagorian woman back with him as a hostage, did he not?" he queried.

Icy fingers clutched at Whit's heart. Mirana! They were going to arrest her! For a moment he contemplated refusing to answer, then realized that all such an approach would do would be to imperil his own position.

"Yes, sir."

"Where is she?"

"We left her over here in the aerial dispatch carrier, sir."

Together they approached the bullet-shaped vehicle. Whit opened the door.

Mirana was gone!

EARTH'S battle fleet roared skyward in search of the fast-approaching enemy. Great silver ships, glistening blindingly in the last glow of the setting sun, they thundered out into the vastnesses of space to challenge Zagor's sleek, black fighting craft.

General Breckinridge said: "They should meet about three hours out, if my calculations are correct. If they don't get any closer than that to Earth, our planet should be spared the worst of the damage."

Whit, beside him, said: "Yes, sir."

"The limited range of their atomic disintegrators should be an important factor, too, Captain. I'm glad you had information on that subject. You'll make me a very helpful aide." A pause. "You're a great deal like your father. We served together years ago."

"Yes, sir."

Half to himself, Breckinridge said: "Even if they managed to defeat our space fleet, Earth still wouldn't be unduly menaced. Our land batteries could fight off almost any conceivable attack."

"Yes, sir."

The battle cruisers were black dots

against the sky.

"We'd better go into the observatory now, Captain. From there we can watch the progress of the battle when they attack."

"Yes, sir."

They walked toward the waiting air carrier. While Breckinridge climbed in, Whit's eyes again were drawn to the sky and the monster air armada. Suddenly his forehead wrinkled in a frown. He shaded his eyes against the sunset. He stared in silence until unable to restrain himself longer.

"General Breckinridge!"

Breckinridge poked his head out of the carrier, squinted skyward also. "What is it, Captain?"

"General, they're coming back!" The young Earthman's voice was aquiver with excitement, his brown eyes gleaming.

"Coming back?" Breckinridge clambered out of the carriers, a pair of binoculars in hand. He focused them upward. "You're right! They are!"

He spun about and into the carrier, Whit close behind him. "Quick! The observatory!" he ordered the pilot.

The monster telescopes at the observatory confirmed them. "In battle formation, too!" Breckinridge commented. "I don't like it. Why should they be coming back?"

BEFORE Whit could open his mouth they had their answer. The world seemed suddenly to explode around their ears. From the bows of the onrushing battle fleet came hurtling bolts of vivid green lightning. Buildings crumbled to dust before their eyes. Green fields turned black and charred.

"Q-rays!" shouted Breckinridge.

"They're attacking us!" his aide echoed. "Our own fleet's attacking us!" His face was pale with horror as he saw the awful destruction the space ships were wreaking.

Already General Breckinridge was gripping a visi-phone. "All land batteries, open fire at will!" he barked. "Fire at will! Fire at will!" He passed a shaking hand across his forehead. "Our own ships! I can't believe it. I still can't believe it. Are they out of their minds? What's happened to them?"

Light was dawning in Whit's eyes. He whirled on Breckinridge. "I've got it, sir!" he cried. "It's Vakarcs' mind control!"

"Mind control? What are you talking about? What do you mean?"

"Those ships!" The young captain leveled a shaking finger at the vast fleet. Every second saw it scream closer, hurling its bolts of destruction and sudden death, transforming Earth into a holocaust of flaming ruins. "Vakarcs invented a machine for seizing control of pilots' minds. They used it to land their space ships.

"You couldn't use it on more than one man at a time, though. It had to be focussed on each individual separately. Now, though, he must have figured out a way to turn it on masses of people, all at the same time." He hastily explained what little he knew about the device. "I never saw the machine itself," he concluded breathlessly, "but they told me it was relatively simple. That all it did was to 'short-circuit the volitional surfaces of the brain'."

The land batteries were answering, now. They hurled their own bolts skyward, crashing them into the oncoming space ships with deadly aim. Shattered masses of metal already were plummeting Earthward all that was left of once-proud cruisers. But still the fleet came on!

General Breckinridge's face was taut with strain. His thin hands moved jerkily. "So that's it!" he whispered

hoarsely. "So that's how one human fiend can blight two peaceful planets, is it!" He was breathing hard, like a man who has run a long way. His eyes were like grey chips of steel. Slowly he turned to his aide. "Well, Captain, if that's the kind of war he wants, that's the kind of merciless savagery he'll get. Earth has seen other invaders, too, but Earth always has managed to survive them."

HE WHEELED back to the windows. Only a few of the land batteries were firing. Smoldering ruins marked the rest. The remaining ships of the space fleet were climbing again, readying themselves for a new attack.

Whit turned from the visi-phone with which he had been busying himself. "It's the same everywhere, sir," he reported, white-faced. "Our ships have struck all over the world. They've wiped out 80 per cent of our land batteries already."

Breckinridge came back from the window, a lean, thin-lipped, dangerous man. "This mind control?" he probed. "It works on a wave principle?"

"Why . . . I guess so, sir."

"Platino-silicoid insulation will stop every wave known to science. Why wouldn't platino-silicoid helmets immunize our men to this mind control device?"

A spark of hope gleamed in Whit's eyes. "Maybe it would, sir. At least it's worth trying."

The space cruisers were swooping again now, roaring down from the heavens in a concentrated attack on the remaining land batteries. The night sky was hideous with the green Q-ray flashes. Great fires leaped skyward. The rumble of monster explosions rocked the very ground.

But this time the space ships did not climb again. They thundered toward Earth as if they, themselves, were huge projectiles. Breckinridge stood by the observatory windows, watching in horrified fascination.

"He's through with them!" he breathed. "He doesn't need them any more—so he's destroying them!"

Down -down—down they came . . . closer and closer . . . Q-rays blazing, full throttle. The first struck; exploded in a burst of flame. The second. All of them, dashing themselves to pieces in the charred and pock-marked ground where the land batteries once had stood.

This time the ship did not climb again

Breckinridge turned away. "That does it," he said dully. "What can we do now? Our fleet's gone. Completely destroyed. All this Vakarcs has to do is land and take over."

His aide said: "No!"

"What do you mean? We're beaten."

"No!" The young captain's face was tense, but his eyes were shining. "Don't you see, sir?" he exclaimed. "Vakarcs

does have to land! That's his weakness. His ships are fast, but they can't carry enough atomic rockets to make the round trip here and back without refueling."

General Breckinridge looked puzzled. "I don't understand, Captain. What good does that do us?"

"If we can keep him from landing, he's licked, sir!" Whit's face was alive with excitement. "And we can do it, sir! I've got it figured out. We'll salvage some Q-ray projecters—old ones, the obsolete models the council's ordered stored away from time to time, will do. We'll have them mounted in moles—"

"Moles?"

"Yes, sir. Mechanical earth-borers. They look like some kind of sea shells and they can travel underground at nearly 10 miles an hour. They carry a crew of three men. Someone developed 'em nearly 200 years ago to dig tunnel systems. There still are hundreds of 'em around, sir—"

"But what good would they do—?"

THE young captain interrupted. "Don't you see, sir? We'll equip the crews with platino-silicoid helmets to protect them from Vakarcs' mind control. Then go underground. Surface observation posts can spot the Zagorian ships when they come down—and there aren't too many places an atomic rocket ship can land, because they need a lot of flat, open country for a field. So one of our moles comes to the surface and blasts the space ship with the Q-ray. And the Zagorians can't fight back because they can't tell where the mole is until it comes up. Which is too late!"

Breckinridge stared at his aide in fascination. "Captain Whitman, you must be mad. That's the worst crackpot, hare-brained scheme I've ever heard." A moment's pause. "But damn it, we'll give it a try! Come on!"

All night Earth's fighters worked, speeding frantic preparations for the invasion that dawn must surely bring. From the farthest reaches of China's Yangtze River to the machine shops of Detroit; from the heart of the Congo to the Skoda arms works, men sweated and strained and swore as they reconditioned the giant moles, resurrected from many a forgotten by-pass.

Out, too, came Q-ray projectors—a few modern models salvaged from the wreckage of the land battery emplacements; but the majority dragged from the dust and grime of storage places unopened in a generation.

And all night long skilled technicians toiled, turning out heavy platino-silicoid helmets that would protect men's brains from the ravages of Vakarcs' mind control.

Zagor's sleek black ships swept down on the morning wind, filling the sky with the thunder of their atomic rockets.

The first landed.

An observer picked up his visi-phone and said: "Landing two miles south of Post X-23!"

Deep in the bowels of Earth came the tremblor-like rumble of a mole surging forward.

Other space ships followed the first. In dozens they came down on that great, open stretch of prairie, unmolested by anyone.

Then, suddenly, the mole's rumble became a roar. Its blunt nose broke the surface and the monster teeth that drove it screamed as they chewed the air. The earth-borer's snub-barreled Q-ray projector blazed green lightning at the nearest ship—and that vessel was no more! Again and again it flashed, clearing the prairie of the invader. Overhead, one of the not-yet-landed black fighters hurtled toward

the shell-like object. The Q-ray projector's muzzle elevated like as if it were one of the anti-aircraft guns on display in a museum. Green flame belched into the attacking Zagorian craft. The vessel plummeted to Earth, a mass of wreckage. Everywhere the story was the same.

GENERAL BRECKINRIDGE clasped his aide's hand. "Earth is saved!" he cried. "The moles are winning! Vakarcs' ships can't land and they can't go back to Zagor!" His eyes were shining. "The international council shall know who was responsible for this victory, Captain!"

The voice of one of the men coordinating the observers' reports and directing the moles' activities broke in: "New landing reported in Gobi Desert."

"Well, send a mole to clean it up," commanded Breckinridge.

"One was sent, sir, but something's wrong. The mole's on top of a rock ridge overlooking the valley where the Zagorians are setting their ships down, but it's leaving them alone."

"What on earth—?"

"Sir! Another mole tried to come up in the valley and the first one blasted it with a Q-ray!"

Whit came to his feet. "One landing place is all Vakarcs needs to beat us, sir!" he snapped. "Something's gone badly wrong, and if we don't check it now it'll be too late."

Breckinridge frowned. "You're right enough, Whitman, but what can we do? After all—"

"Give me a shot at it, sir. I can be there in an hour if I use a fast aerial carrier."

For a moment his superior hesitated. Then he galvanized into action. "We'll both go, Captain. Right now. Come on!"

Brief minutes later they were in the air, slashing across the sky in the fastest carrier they could find, an air ambulance piloted by a young doctor who flew like one possessed. They saw the Rockies loom ahead . . . and, in a matter of seconds, disappear behind them. The broad expanse of the North Pacific rolled beneath them. Then Korea and the mainland of Asia. Soon they were zipping down to a landing close to the rocky ridge on which stood the traitor mole. Giant Zagorian space ships lined the valley beyond, and others were coming in every minute.

"Lucky this carrier is so small," Breckinridge commented with a wry smile. "No one thinks we're worth shooting down."

The young captain nodded agreement. "You hit it, sir." He turned to the doctor-pilot. "Land as close to the mole as you can. We're safe if we can get right next to it, where they can't bring their Q-ray to bear."

The doctor caressed the controls and they zoomed in yards closer. As one man they scrambled out of the carrier and raced for the mole.

BRECKINRIDGE drew his ray-gun. Gripping it by the barrel, he hammered on the mole's shell-like surface. "Open up!" he shouted. There was no response.

"We've got to get in there—fast!" snapped Whit. "It's a cinch there's a way, if we can only think of it."

The doctor gave a queer little snicker. "Wait a minute," he advised. He ran back to the carrier, returning in a few seconds with a quart bottle.

"What's that?"

"You'll see, gentlemen. Are there any crevices in this tin can that go through to the inside?"

Whit pondered. "I think the Q-ray projector fittings do," he said at last.

"Fine." The doctor sidled around

the mole, careful to avoid exposing himself to the deadly ray. He uncorked the bottle and began emptying its contents into the protector's fittings.

"Hurry!" urged Breckinridge, his voice tense. "The Zagorians realize something's going on over here. Some of them are heading this way!"

Whit followed his superior's gesture. A group of perhaps 50 spacemen were advancing at the double.

"Here they come!" called the doctor.

"We've got to reach the carrier!"

Breckinridge and the young captain whirled. The mole's hatchway was opening. A bleary-eyed occupant lurched out, followed by two others. The doctor—his bottle less than half empty—leaned against the earth-borer's side, choking with irrepressible laughter.

"What is that stuff?" Whit demanded in astonishment as the three mole operators collapsed on the ground, eyes streaming and red.

"A little mixture of my own. It also has certain medical uses. The main components are valerian and ammonia." Another laughing spasm choked the doctor off.

GENERAL BRECKINRIDGE sprang to the mole's hatchway, then reeled back. "We can't go in there!" he clipped. "No one could endure that stench."

"The wind will clear the worst of it away in a few minutes," observed the doctor. "We can stand it, then, if we leave the door open."

"I'll get the ventilating system working," said the general. Taking a deep breath, he disappeared into the mole. A moment later he was back, his usually calm face pale with anger. He carried one of the anti-mind control helmets in his hand. "Look at this thing!" he snapped.

"What's wrong?" his aide demanded.

"It's not platino-silicoid. It's a fake."

The young captain whistled. "So that's why they did as they did. Vakarcs' mind control caught them." He stared at his superior. "But why would anyone want to make up fake helmets in a crisis like this? They had everything to lose, nothing to gain—"

"Wrong, Captain!" the elder officer retorted, his face stern. "Whoever did this had everything to gain."

"I'm not sure I get it. You mean—?"

"I mean that this was conscious sabotage. The work of a fifth columnist, a traitor."

"But who is there—"

"There's at least one Zagorian on Earth and unaccounted for!"

The thought hit the young captain like a physical blow. He almost staggered under the impact. "Not Mirana—"

The doctor's voice broke in. "You

two had better quit arguing. It looks like there's going to be more important things to do."

The general and his aide jerked around. The Zagorians had spread out in a skirmish line. They were barely 200 yards away and advancing rapidly, disintegrator guns glinting under the desert sun.

"Looks like my trick backfired," muttered the doctor. "We can't stand being penned into that mole yet. But we sure can't stand here while those Zaggies mow us down. Looks like we'd better run."

"But we can't leave!" Breckinridge exploded. "They'll still control this valley—"

Whit turned on him. "Where did this bunch of spacemen come from?" he demanded.

"Why . . . that space ship just ahead of us. The nearest one."

"Come on!" the younger man commanded. "Run for the carrier!"

"The carrier?"

"Don't you see? If 50 men left that space ship, there can't be more than a handful left on board. The doctor, here, can fly us right over their line and land us next to their ship. We'll seize it and fight our way out."

THE three of them raced madly for the carrier. Before they could get their breaths they had risen, flown over the Zagorians, and landed almost in the shadow of the black war vessel which was their destination.

The Zagorian fighting men rushed wildly back toward their ship. The Gobi's merciless sand and stone slowed them, made them reel with exertion. But on they came!

"Hold them!" the Earth captain shouted to his companions. "Fight them off! I'll clear the ship!" Heedless of danger, he lunged for the black craft's hatchway, ray-gun in hand.

The thought struck him: what if it's a trap? What if someone's waiting just inside, ready to blast me with a disintegrator as I come through the door?

"Then I'll make it as hard as I can for 'em!" he muttered grimly. He leaped headlong through the hatchway, landing on his left side in a smoking slide across the metallic flooring.

Clang!

The sound was like the ring of a muffled bell. He caught a blur of movement out of the corner of his eye. The hatch had swung s h u t! He was trapped! Either he must win the ship, or lose his life as the penalty for trying and failing. No outside help could aid him now.

A thin line of purple light tore into the wall behind him. A disintegrator! The Earthman fired back by reflex as he rolled away. But the angle was awkward and in the clamor of his nerves he jerked the trigger instead of squeezing. His ray-gun's beam went wide.

A bench gave him momentary shelter. For the first time he caught a glimpse of his opponent. His heart leaped as his eyes riveted on a familiar dark, gloating face. Vakarcs! This must be his headquarters ship! The face beat his shot to cover.

Again the purple bolt of the atomic disintegrator blasted out at him. The bench jerked sidewise, the far end of it twisted beyond recognition.

Vakarcs' mocking laugh rang out in triumph from behind a barrier of heavy packing cases at the far end of the room.

"I've got you, you *pandor!*" he cried. "Your silly ray-gun can't break through to me—and my disintegrator will tear apart anything you hide behind! I swore I'd get you. And I will!"

Once more he fired. The Earthman dived from behind the bench as the purple snake of light struck. His hurtling body crashed against a table and upset it. He was wet with icy sweat and his breath came in gasps. His eyes darted wildly about the room.

The lights!

HE WHIPPED up the ray-gun and fired. The room went black. Even as the darkness engulfed it the young captain rolled from the table's cover. He sprang for the Zagorian's barricade. The dark general was cornered at last!

An oblong of light flashed in front of him. A door! Vakarcs' lean form was momentarily silhouetted. The Earthman lunged at him. But the other had slipped through. The heavy panel slammed against Whit. His hand —the one that clutched the ray-gun— was crushed between the door-edge and the jamb.

Pain leaped through him like a living thing. A scream of agony burst from his throat. He hurled his weight against the portal, heaving against it with all his might. For a moment it held as if anchored by Gibraltar itself. Then, so suddenly it threw him off balance, it burst open. The ray-gun slipped from his tortured fingers. He staggered through the doorway.

The room in which he found himself apparently was the crew's quarters. Bunks lined the walls. Extra clothing and bedding hung on hooks here and there.

And, at the far end, framed between the rows of bunks—Vakarcs!

Exaltation shined in the Zagorian's eyes. It rang in the snarl of triumph that came from deep in his throat. His gun hand came up. The disintegrator lined on the Earthman's midriff.

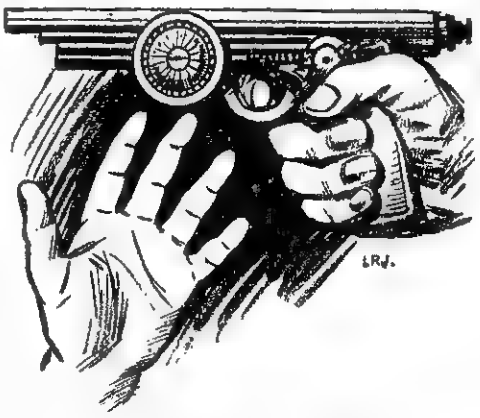
"And so Earth loses!" he cried.

Helpless fury blazed from the other's pain-racked eyes. He was gone! Done for!

But at least he could try, even though he knew without question that doom had caught him. He could pray that even in his death throes he would take this enemy of all mankind to hell with him.

The Earthman moved, then. Moved to the tune of his adversary's mocking laughter. He speared, left-handed, for the ray-gun on the floor beside him. His fingers wrapped around the butt. Simultaneously the Zagorian's knuckles went white against his disintegrator's trigger.

It was the end.



The forefinger pulled home on the trigger . . .

BUT a bony hand shot forth from the bunk beside which Vakarcs stood. Gaunt fingers clutched his gun-wrist. Stringy muscles dragged down his arm. The bolt of purple light splashed through the floor.

The Earthman braced himself. His forefinger pulled home the trigger. Silent, invisible, deadly, his ray-gun's beam lashed out. He saw Vakarcs reel; watched the black char of death spread through his chest.

"You . . . *zanth* . . ."

The Zagorian's eyes were on the

creature in the bunk. With a supreme effort he tore himself free . . . blazed into the crumpled mass of bedding. An instant later he pitched to the floor, already dead.

The young captain wasted no time on him. Turning, he hurried to the outside hatch. He heaved back the control lever. The door opened.

"Captain Whitman! You did it!"

It was General Breckinridge. The doctor close behind him, he clambered into the space ship.

"Almost before you got aboard, those spacemen who were stalking us lost all interest in the proceedings. They began to wander around like men in a daze. At precisely the same instant, the space ships overhead began to circle aimlessly. It was as if the pilots had forgotten what they were supposed to do."

"Vakarcs must have turned off his mind control machine before he came out to deal with me," Whit commented. He tersely outlined what had happened.

The doctor manipulated the young officer's hand. "Nothing broken," he reported. "Painful as the devil, but it'll be all right in a couple of days."

"Good. Now let's go back into the bunkroom. I want to see who that poor devil was who saved my life."

Together they hurried aft. Whit bent over the still figure in the bunk.

"Eberhardt!"

The gaunt scientist was dead, killed by the atomic bolt Vakarcs—dying—had fired into him. Yet, somehow, there was a peace in his pale blue eyes that had never been there in life.

"We called him mad," the young captain said in a voice that trembled with emotion, "but he was sane enough to save the world!" He closed the staring eyes, crossed the bony hands over the gaunt chest.

The doctor edged him aside. "Mad?" he said, a frown wrinkling his forehead. "This man wasn't insane. He was loaded to the ears with *tetrazahti!*"

"Tetrazahti?"

"IT'S a Martian drug, manufactured from one of their desert plants. It works on the nervous system. The victim's mind is as clear and sharp as ever on things which don't affect him personally. But he has delusions of persecution. He thinks everyone is against him; that powerful enemies are trying to do terrible things to him. It dulls his moral sense, too—like marijuana. When a man's got *tetrazahti* in him, he'll pick a quarrel with his best friend and kill him without a quiver."

"But how can you be so sure? He looks just the same—"

The doctor lifted the dead man's arm. "I knew it the minute I saw these," he declared. His finger indicated dozens of tiny turquoise dots speckling the forearm. "Nothing but *tetrazahti* injections leave that kind of tattooing!"

"But why? They had him prisoner. Why drug him? And Zagor never touched Mars. Where could they have gotten the stuff?"

General Breckinridge, stern-faced, said: "From the description you gave me of Professor Eberhardt's actions on board Earth's space ship, I have no doubt he was getting those injections long before you ever saw Planetoid X." He hesitated, then went grimly on: "Perhaps it will clarify a few things for you if I tell you that the professor was an international council secret service man, assigned to the Planetoid X expedition to check possible treason."

Dawn began to break in Whit's eyes. "My God!" he whispered. "Now I see it." He stared at his companions wide-

eyed. "There were traitors aboard, but they couldn't operate with Eberhardt along. So they managed somehow to dose him with this 'tetrazahti' stuff, knowing he'd take on such symptoms of insanity he'd be thrown in the brig.

"Then he escaped on Zagor. Vakarcs caught him. He discovered Eberhardt's specialty was the human brain. He forced him to improve the mind control machine to the point where it would manipulate masses of people instead of just individuals—"

The roar of rockets cut him short.

As one man the three rushed to the black ship's hatch. Above them, the Zagorian ships no longer circled aimlessly. Once again they were thundering down to Earth in ominous formation. The first squad already was landing far up the valley, beyond the previously-grounded ships.

"The mind control!" cried Breckinridge. "It's working again! Those ships are out to fight!"

"Look!" the doctor shouted excitedly. "Those Zaggies who were attacking us! They're coming on again!"

WHIT leaped to the control lever. He slammed the hatch shut. Turning, he raced forward through the ship, the others at his heels.

They found the room they were seeking near the bow. The mind control machine's room.

There was no one in it!

Breckinridge and the doctor stared at each other. The same thought hit both at once.

"There's another machine!" said the general in a flat voice. "Vakarcs is gone, but another of these devils is at the helm. Our work's been wasted. Earth has lost!"

But Whit was not listening to them. His eyes were fixed on the mass of delicate electrical equipment. And his mind was flashing back to another such mass, far, far from here.

"I'm leaving!" he said suddenly.

"What—?"

"You're right. There's another machine. And I think I know where it is!"

"We'll go with you—"

"No. You two stay here. If I can't do this job alone, it can't be done." He paused to snatch up a disintegrator pistol.

"Get in contact with headquarters. The Zagorians have outfits like our visi-phones that you can figure out how to use. Have some more moles sent. Get this valley cleaned up. I'll try to chop the head off!"

He left through the forward hatch, a ray-gun in either hand. The crowd of Zagorians at the after entrance didn't see him until he was nearly to the aerial carrier. From there on he shot his way.

He flew the carrier back as it had never been flown before. Eastward, ever eastward. Eastward across the grim, silent desert. Eastward, through a howling North Pacific gale. Eastward, across half of North America, until at last his tired eyes sighted the giant landing field which was his goal.

HE SET the carrier down almost in the shadow of Earth's last space ship. The ship which had been so travel-worn from its long journey back from Zagor that it had been unable to take the air with the other ships when Earth's fighting fleet roared forth against Vakarcs' forces.

The central hatch was open. The young captain thrust his ray-guns into his belt and hauled himself cautiously aboard. Drawing the left-hand gun—his right hand still was too tender to be much use—he tiptoed along the familiar passageway.

He reached the doorway he sought. The heavy portal was closed, as he had expected it would be. Silently he got out the disintegrator pistol he had seized just before leaving Vakarcs' flagship. Gripping it in his right hand awkwardly, he leveled it squarely at the lock. He was shaking just a little as he pulled the trigger.

Every muscle tense, he threw himself forward. His shoulder crashed against the paneling—and the door burst open.

The man who sat before the control board, manipulating its delicate instruments, came out of his chair like a berserk bull, wheeling as he rose.

"Whitman!"

The young captain nodded. The weapons were very steady now; his moment's nervousness had passed.

"Yes, General Wolfe, it's me—Whitman."

"My boy, I'm glad—"

"Forget it, General. I know the truth now. I didn't realize it 'til a little while ago, when I saw Vakarcs' mind control room. Then I remembered this room-full of stuff you brought back from Zagor. It's an exact duplicate of the other machine, even if you did claim it was for some other purpose." He laughed, a little bitterly. "After that, it all began to add up. Within a couple of minutes I knew that you were the man we wanted—the traitor to Earth."

Beads of sweat stood out on the bull-necked military man's forehead.

"All right!" he roared in sudden defiance. "I admit it!"

PICKING up the ever-present riding crop from the table, he stalked across the room to the far corner despite the threat of the younger man's guns. Then, turning, he faced his captor.

General Wolfe faced his captor

"Why shouldn't I turn traitor to that damned council?" he bellowed in a rage. "Do you think I'm going to spend my life wandering through space on one mad mission after another? Do you think I haven't any desire to claim the wealth and power I deserve?" He slashed the air with the crop in a raging frenzy.

"You know the answer, Whitman! At least, you should—for your own father lies in a traitor's grave!"

Misery made deep pools of the young captain's brown eyes. His face was tense and pale with strain.

"You, of all men, should be *with* me, Whitman! You know how the council deals with the likes of us. Well, now's our chance!" The burly soldier's voice was alive with enthusiasm. "Think of it, my boy! Earth is beaten already! Zagor, too!" He paced the floor. "In five years, we can rule the universe." A pause.

"From the beginning, my strategy has been perfect. The council sent a spy with us—so I drugged him. Then we reached Zagor and I met General Vakarcs. There was a man! We hadn't been alone 10 minutes before we understood each other. We knew

what we wanted, and we knew how to get it.

"We planned it together. General Vakarcs managed Eberhardt's capture. He'd have succeeded in his first coup, too, but he let a pretty face sidetrack him.

"When that blundering Casoda came out on top, I hid Vakarcs here, on our ship—the one place they never thought of looking. Eberhardt, too. We perfected the improved m i n d control within a month.

"As soon as it was ready, I took off. Vakarcs used the mind control to seize Zagor. Then, according to schedule, he took off with his fleet for Earth. At my end, I let our fleet go out, then used the control to turn it back. That wiped out both fleet and land batteries so that Vakarcs could land.

"If everything had gone right, we'd have finished Earth off and consolidated our control here, then gone back to Zagor and established some discipline there." The general faced the young captain. "We still can do it, Whitman!" he thundered, waving the crop in the air. "Come in with me. We'll rule the universe together!"

Slowly the other shook his head. "No, General Wolfe. Once I might have. I admit it. But not now. I've seen too much of what your kind of rule means. Too much blood and death and destruction. The international council may be harsh, but it's harsh with the few dissenters, not all mankind.

"No, General. This is the end of the game, and you lose! So walk past me out the door, and don't make any false moves."

THUS they marched down the passageway: the powerful, raging military man ahead; the somber, watchful-eyed young officer behind.

General Wolfe dropped heavily from the hatch to the ground. "May I help you down?" he mocked, gesturing to his ex-aide with the riding crop.

The taut-nerved captain did not answer. He slid to a sitting position and swung his feet out of the hatch in preparation for descending. He wanted to take no chances with having his guns jarred out of his hands through jumping. He let go.

The next instant a bolt of lightning seemed to be searing its fiery course through his right s h o u l d e r. He screamed in anguish as the pain exploded in his brain. In a haze he saw General Wolfe's face contorted in a killer's snarl. Saw the riding crop the big man held in his hands as if it were a rifle.

It came to him, then, as the general lumbered across his prostrate body and clambered back aboard the space ship. He remembered things that had seemed unimportant at the time . . . things like the ray-gun beam that had nearly killed that day when Eberhardt pulled the empty pistol . . . the fear the gaunt scientist-secret service man had shown every time that crop had been pointed at him . . . even to the point of running for his life that afternoon they had landed in Zagor. He realized the truth, now: Eberhardt had known the truth; had realized that the general's crop contained a hidden ray-gun tube that could fire one deadly beam . . .

There was a roaring in his ears and it dawned on him that the space ship had taken off. Vaguely, he felt surprised. But still he lay prostrate, unable to move a muscle. At last he saw men around him.

"Ray-gun beam through the right shoulder," someone beyond his sphere of consciousness said. "He's lucky to be alive."

Then he was being lifted and carried away somewhere. Doctors were working over him. Nurses sponged his forehead with cool water. The world was somehow grey . . .

TWO hours from the time he had been shot, Whit sat bolt upright in his hospital bed. A nurse rushed over.

"Lie down!" she ordered. "You're badly hurt."

But already the young captain was jerking back the covers. "What's happening?" he demanded feverishly. "What's he done? Are we winning?"

From the sky came his answer: the roar of rocket ships. Whit staggered to the window. Black Zagorian ships hovered overhead. And leading them was the silvery form of Earth's last space cruiser!

Two doctors, summoned by the nurse, tried to persuade him to lie down again.

"Your chances are slim enough, now, without making them any worse," one urged.

The fire of determination as well as fever gleamed in the young captain's eyes. He gripped the medico's arm.

"There's still a chance to win!" he snapped. "I think I've still got the ace that'll beat that madman, but there's no time to lose."

"What d'you want to do?"

"First, tell me where General Breckinridge is."

The doctor picked up a visi-phone. "Last reports had him in a captured Zagorian space ship in the Gobi Desert," he announced after five minutes' frantic 'phoning.

"I've got to get there!"

"You can't. You'll die on the way!"

"Better me than all Earth's people!"

The thunder of buildings collapsing under disintegrators' concentrated fire lent emphasis to his words. The doctor gave up. "Order an aerial ambulance," he commanded.

"I came in one," Whit told him. "It should still be standing down on the field."

Five minutes later the young captain was being loaded into the carrier on a stretcher. Off they roared for the Gobi once more. A stack of anti-mind control helmets crowded the space beneath the stretcher.

BRECKINRIDGE and the doctor, they found, had abandoned Vakarcs' ship for the mole. Here they fought on against the screaming attacks of the Wolfe-directed Zagorian vessels. And while dozens of wrecked craft testified to the havoc the Earthmen had played in the valley, other dozens had succeeded in refueling and taking off, again to join in the fight.

When the carrier landed close beside the mole, Breckinridge sprinted across at once. His jaw dropped as he saw Whit's crippled form.

"What—?"

The young officer forced a weak smile. "Got . . . caved in a little," he said weakly. Then, changing the subject: "Wolfe's up there in command."

"That traitor!" Breckenridge's thin face was aquiver with anger. "We tried to get in more moles, but the mountains stopped them. Well, at least we're making that dog pay dearly for his victory."

"What happened to the crew of Vakarcs' flagship? You know, the gang that was chasing us?"

A tight smile touched the other's lips. "About half of them were killed. The rest were herded into the bunkroom. They're locked in there. I left the men who were operating the mole when we came to guard them."

The young captain raised himself on

one elbow. "Quick!" he exclaimed. His eyes were blazing. "We've got to get over there. And bring the helmets under this stretcher!"

Inside Vakarc's ship, he explained. "We've got one chance," he said. "This ship is as fast or faster than Wolfe's. By putting helmets on the crew, we can release them from the mind control. We'll go aloft and fight it out with him. If we can shoot him down, the rest of the Zagorian fleet will snap back to normal."

For a moment General Breckinridge hesitated. Then: "It's worth a try, Captain. Because with Wolfe in command, those devils aloft know every tactic we've got. Unless we get him, they'll clean us out for sure!" He spun about, barked an order to one of the mole's original crew. "Put these helmets on those Zagorians in the bunkroom!"

WITHIN minutes Vakarcs' dazed, bewildered crew stood before Whit and Breckinridge. Anxious glances testified that they still were unable to comprehend what was going on.

"Men," said Whit quietly, "you all know that Zagor wants peace, not war." He spoke into one of Zagor's translator-mouthpieces.

Heads nodded in assent.

"Earth, too, wants peace. That's why the Earth mission was sent to Zagor in the first place—to establish friendly relations between our two planets.

"But because of two men's machinations because your General Vakarcs and our General Wolfe were gripped with an insatiable lust for power—, both our worlds have been doomed to chaos and destruction!" The young Earthman's voice trembled with emotion.

"Now, Vakarcs is dead, but General Wolfe rides on his mad way. If he's not stopped, Earth, Zagor,—the whole universe—will pay the penalty.

"I'm here to ask you to stop him. This ship Vakarcs' flagship—is our last hope. With it, we've got the slimmest chance mortal man ever had. Conceivably we can go up in it and shoot Wolfe down. Probably not; a thousand or a million chances to one not; but conceivably."

There were nods from the Zagorian crew.

"That's where you come in. You're the only ones who know how to fly this ship. You're no longer controlled by the mind machine that dictates to your friends on the other Zagorian ships out there in space.

"We can't force you to fly this vessel. I'll tell you frankly that if you do, you'll probably be committing suicide, because the odds are so heavy. But if we succeed—if we *do* shoot down Wolfe —, you'll know you've done your part to rid the solar system of the greatest menace it's seen in a thousand years!"

It was not an impressive address. The young captain was too weak to make it dramatic or to breathe fire and enthusiasm into it. It was merely a statement. An analysis of the situation as it stood. And, now that it was made, Whit lay back gasping, his face pale and drawn and weary with the effort of it, his eyes fallen closed from sheer exhaustion.

THE Zagorians were whispering among themselves, arguing in their own strange tongue. At last the man who seemed to be their leader turned. He spoke into a translator-mouthpiece. His face was grave but resolute.

"To win peace and freedom for the universe is worth any sacrifice, sir!" he declared in a firm voice. "We men of Zagor await your command!"

For an instant a smile flitted across the young Earthman's face—the smile of a man who has seen his confidence in the human race rewarded. Then:

"Put General Breckinridge off the ship."

"What—?" Breckinridge started forward, his thin face aflame. "You can't—"

"If we fail, General, Earth will need you." The captain gestured weakly to the Zagorians. "Put him off!"

They carried him to the control room on his stretcher, and propped him in front of the visi-screen. Commands he could not understand were barked. He felt the great ship tremble like a greyhound jerking at its leash. Dimly came the roar of atomic rockets.

Then all sense of motion was lost. No sound penetrated to the control room. The Zagorian leader said: "We're off, sir!"

For what seemed hours they climbed into space. "This is our best strategy, sir," reported the Zagorian. "General Wolfe will be expecting no attack from outer space. And we can locate his ship much more quickly from above than from below."

On and on they cruised. Around Earth a dozen times.

"Where is he?" grated Whit, his eyes burning with fever. "Where's he hiding? Why doesn't he come out and fight?"

The Zagorian said: "Lie back, sir. You're too weak to sit up."

And then they found General Wolfe.

His silver craft hung high above Earth, like a lone star in the night. Below it, the black ships of Zagor hurtled again and again on the moles which now were the planet's sole defenses, the purple shafts of atomic disintegrator beams fencing like rapiers against the broader cutlass-strokes of the moles' green Q-rays.

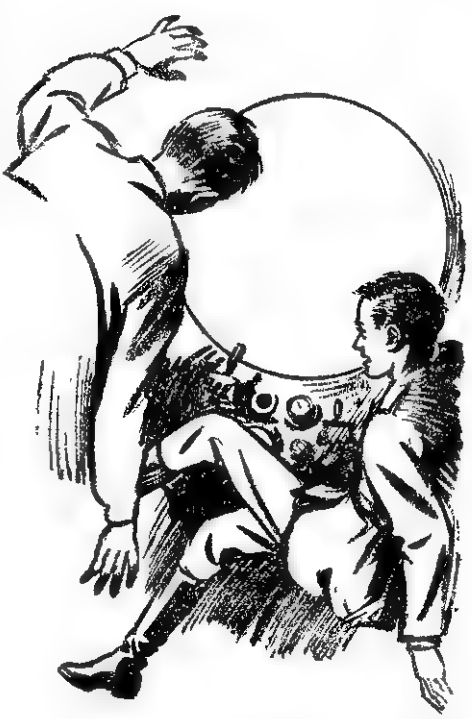
"He's alone!" breathed the Zagorian at the controls as the panorama flashed onto the visi-screen. "We can strike at him from above! Our disintegrator beam will cut him in two before he knows we're coming!"

The pale young Earthman on the stretcher raised himself on one elbow. "Then strike!" he gasped hoarsely. "Strike, before he wakes up! Hurry!"

THE Zagorian snapped orders. The silver ship moved from the edge of the visi-screen to its center. Second by second it grew as they slashed down through space upon it, like a falcon plummeting on a dove.

"Disintegrator crews prepare for firing!" barked the Zagorian.

Beside him, on the stretcher, exaltation was singing through Whit's veins. His eyes were glued to the silver ship



Their ship careened sidewise

that now blocked out practically the entire screen.

"Ready!"

The Earthman's throat was so dry he could not swallow. His lips felt thick and stiff. Their quarry was less than a thousand miles away now. Bare seconds more and it would be within range.

"Aim!"

Aiming, with these ships, was not a matter of sighting, for the disintegrator guns were fixed. But for maximum effect delicate adjustments had to be made according to range. Once they were ready—!

"Fire!"

Their ship careened sidewise through space. The silver craft below them was gone from the visi-screen. Whit crashed from his stretcher, hurled through the air as if by a monster's hand. The Zagorian at the controls slammed against the wall with a wild cry. Bells were ringing, whistles shrieking. Their ship was going end over end out through space.

A man burst through the doorway into the control room. He shouted to the Zagorian leader.

"We're hit!" snapped the other. "The whole after-part of the ship is gone!"

The young Earthman somehow managed to reel to his feet.

"It was a trap!" he choked. "It was too easy. Wolfe let us sight him—let us come close to him. But he had other ships hiding, out in space beyond us!"

Another bell was ringing with a discordant clangor. It struck a note in the Earth officer's benumbed brain.

"A visi-phone bell!"

THE Zagorian lurched to his feet. "Yes. Vakarcs had one of your Earth visi-phones installed on this ship so he could keep in touch with General Wolfe. It's over in the corner."

Whit staggered across. His finger jammed down the button that opened the circuit.

Like magic, General Wolfe's heavy features appeared in the little screen. His voice thundered into the control room.

"A good commander never leaves his rear unguarded, no matter how confident he is that there's no danger of attack, Captain. They should have taught you that in military school." His face contorted in a roar of laughter. "But then, Captain, experience always is the best instructor. That's a thought for you to take with you as you ride on your way to hell in another minute!"

The young captain half-turned. His hand moved in a feeble gesture that brought the Zagorian to his side.

"It's all over, sir!" the Zagorian choked. He motioned to the control room visi-screen. Black ships of Zagor already were hurtling down upon them to finish the kill. "They're coming now. We'll manage to take a couple with us, but then . . ." His voice trailed off.

But the Earthman clutched his arm. "Look at Wolfe in this screen!" he whispered hoarsely.

"Yes. But what—?"

The captain's eyes were like coals of fire. "His head! Don't you see? He's got no mind control helmet! His brain is open to seizure! And here, on this ship, we've got Vakarcs' mind machine!"

The Zagorian stared at the visi-phone's screen. New life was coming into his eyes. He sprang across to the ship's command phone. "All disintegrator crews! Fire at will!" he shouted. Then he was back, lifting the almost-collapsing Earthman, carrying him to the tiny mind control cabin. Leaving Whit there, he rushed out. A

moment later he returned, another man with him. "He knows how the control operates," he explained.

The man twisted dials, threw switches.

"He's focusing it on Wolfe, himself," the Zagorian asserted.

"No!" gasped the Earthman. "Get the pilot! We'll dive that ship straight to Earth, full speed ahead!"

The Zagorian snapped more orders. Then: "The machine's ready!"

"Turn it on!"

THE man at the mind control slammed home a huge switch. Whit staggered to his feet. "Let's get back to the control room," he said. Nodding, the Zagorian helped him through the passageway.

From every direction black ships dived at them. Whit watched them in the control room visi-screen. Here and there one fell as their own disintegrator bolts smashed home. But always there were more pouncing down. Already their own ship was crippled. Soon it could not help but fall.

But below them, Wolfe's silver vessel plummeted Earthward at a dozen times the speed of sound. Down . . . down . . . down, to the war-torn planet below.

Whit's eyes were gleaming. "We may live yet!" he whispered. "If we can hold out 'til it crashes, we're saved. Because then those other ships will be free from the mind control!"

The visi-phone's bell rang stridently. Whit jammed down the button.

General Wolfe's rage-contorted face stared up at him. "You young fool!" he bellowed. "Did you think I'd let you get away with this? Did you think I'd leave one loophole open?"

The young captain smiled weakly. "I didn't think you would, General . . . but it looks like you did!"

"Then look again, damn you! Look at this!"

Another scene flashed onto the screen.

The hoarse cry of a tortured animal burst from the young Earthman's throat. His legs turned to water. He had to catch the corners of the visi-phone stand to hold himself upright. There was madness in his eyes as he stared down at the screen.

"Mirana!"

For there, staring up at him, was the girl. She smiled, a wan little smile; and her fingers moved in that characteristic gesture of smoothing her silky, blue-black hair.

"Mirana —!"

THERE was heaven and the adoration of angels in the way Whit said the name. Heaven, and hell—the hell of a man who sees something worse than death staring into his eyes.

"Yes, Mirana, Captain Whitman!" came the general's triumphant snarl. "Crash me, and you crash her, too! Kill me, and she dies beside me!" A moment's pause. "Two minutes more and we won't be able to pull out of this dive. Make up your mind, Captain! But remember —if I die, she dies!" The visi-phone snapped off.

Two minutes.

The young Earthman still stared down into the empty screen. The world was swimming before his eyes. He saw it now . . . saw it with hideous, awful clarity . . . The general, telling him as they rushed back from Zagor to Earth that the girl had been brought as a hostage. A weapon to hold over Vakarcs' head. And now—a club above his own.

He saw other things, too. Mirana, standing beside him in a Zagorian garden, her face upturned to his. Mirana, and music and laughter—the first real

joy he'd known since that black day when they told him his father had died a traitor in the far reaches of space. Mirana, and the promise of happiness to come. Mirana, the one girl he had ever loved . . . the one girl he ever *could* love . . .

He reeled on his feet. The agony of his wounded shoulder was forgotten in a new, more exquisite torture. His eyes were glassy and staring and his breath came in gasps. Strange, animal noises came from far back in his throat. He tried to cry . . . to break and cry like a woman. But he was a strong man and had forgotten how to cry, so now his stomach writhed within him and his heart came up and tried to choke him because he could not find the key to tears' release . . .

He could see the control room visi-screen, and the grim, silent Zagorian who stood before it, watching death rush down at them—and watching the silver ship below speed faster and faster toward Earth and oblivion.

Earth. A shambles of death and destruction. A bloodsoaked blight on the solar system. A planet where millions had died in less than two days . . . and where millions more were destined to die unless that silver ship crashed on to doom. A planet which General Wolfe would make the headquarters for the looting of a universe . . . for the ravishing of the entire human race. A planet that had fought 10,000 years to build a world of peace, and freedom, and the joy of living . . . And now—

The Zagorian turned. There was pity in his eyes; and understanding. Even unto the point where he would do as he was ordered, regardless of whether it brought him face to face with death . . .

"Well, sir?" said the Zagorian.

There was silence, then. Dead silence. The young Earthman was staring through the visi-screen. Through the ship's wall. Out beyond the universe itself. He was swaying like a sapling in a strong wind.

"The two minutes, Captain. They're almost gone."

A voice from beyond the grave said: "There is no change in orders!"

The silver ship spattered itself to atoms in the high fastnesses of the Ural Mountains.

Earth. A shambles of destruction!

THE grey-haired council president said: "There are times when democracies such as ours make mistakes. Your case was one of these. This medal—the highest it is in the international council's power to award—will, we hope, make some slight amends. Colonel Farnsworth Whitman, the Order of the Silver Comet is hereby conferred upon you!" He leaned over the white hospital bed to pin the decoration in place.

The young officer looked up at him with eyes dulled and somber.

"I don't want it!" he said, and weak-

ly shoved the president's hand away.

"Don't want it!"

"What good are medals? I did my job. *Now leave me alone!*"

The grey-haired president flushed. "I regret your sentiments, Colonel. But I have another medal here, and you are the only one available to accept it on behalf of the man to whom it was awarded."

"Another medal?" The young Earthman's forehead wrinkled in a puzzled frown.

"A posthumous decoration, awarded to your father, Colonel Farnsworth Whitman, Senior, at the same time the council unanimously voted to honor you."

"My father!" For a moment life sprang into the wounded man's eyes.

"Yes, your father. He, also, was granted the Order of the Silver Comet. Investigation of General Wolfe's secret papers proved conclusively that Colonel Whitman died in defense of democracy and the international council while fighting an uprising maneuvered by General Wolfe. When the uprising failed, the general placed apparently conclusive evidence of your father's guilt for the revolt before the council, thus clearing himself of responsibility."

There was almost a glow of pride in the young officer's answer: "I'll accept that medal, then. For my father."

The council president stepped back, and General Breckinridge came forward. "There's another visitor for you, Colonel," he said.

"I don't want to see anyone."

"But this is rather a special case." He turned. "Nurse! Show her in!"

SHE stood there, for a moment, in the doorway, as if half-afraid to enter. The blue-black hair, shimmering, still flowed down in rippling waves to her slender, graceful shoulders. And her eyes still revealed the dark depths of forest pools glistening in the starlight. They were warm, now, and tender, and glowing with woman's love.

The wounded man stared at her. His pain-racked body went tense.

"Mirana!" he cried, like a man who sees a ghost return.

"Yes, Whit. It's Mirana."

Still he lay as if dazed, eyes wide and staring. Her cool fingers touched his dry, feverish forehead; moved down to caress his hollow cheek.

Then, suddenly, his arms were about her, and hers about him. "Mirana, Mirana!" he kept whispering, in a voice so emotion-choked it could hardly be heard. And she was crying, the glad tears of a woman whose cup of joy is running over.

"But . . . you were on that ship!" he said at last. "I saw you with my own eyes in the visi-phone."

"You saw my shadow, silly!"

"Your shadow—?"

"Don't you remember the moving pictures you took of me before you left Zagor? Wolfe just projected them onto the wall, and over the visi-phone you couldn't tell the difference between the pictures and me."

"Then where were you? You disappeared while General Wolfe and I were in the council meeting that day of the first attack—"

"I went for a walk and got lost. And by the time I was able to get my bearings, the first attack was on, and the next thing I heard of you, you were careening around in moles and space ships and ambulance carriers."

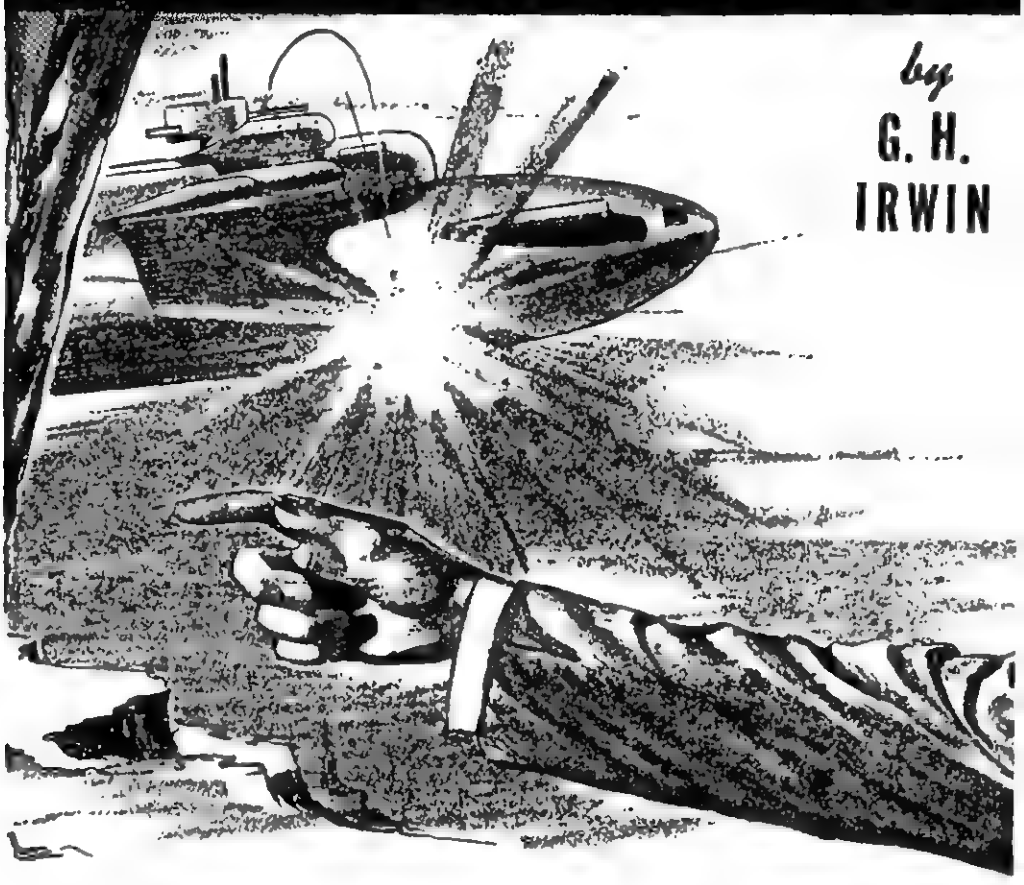
The long sigh of a man who has finally found peace came from Whit's lips. He held her close.

Turning her head, she caught the grey-haired council president's eye.

"Maybe you'd have better luck presenting that medal now!" she said.

The VENGEANCE of

by G. H. IRWIN



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Synopsis of Part One

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Brand recognizes, with stunned surprise, the voice of JEFFRY KILLIAN, whom he had believed drowned in an accident ten years before.

At that time, Brand had been prepared to marry ESTELLE CARTER, had purchased a cozy home on Earth, and intended to devote his life to loving and caring for her. Awaiting her arrival at the gala wedding attended by all his comrades of the patrol, a telegram comes, announcing her elopement with Killian. In bitterness, Brand tears up the deed to their home, and prepares to go on a dangerous mission into space.

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"You're leaving with me, now!" said Martin Brand

The VENGEANCE of MARTIN BRAND

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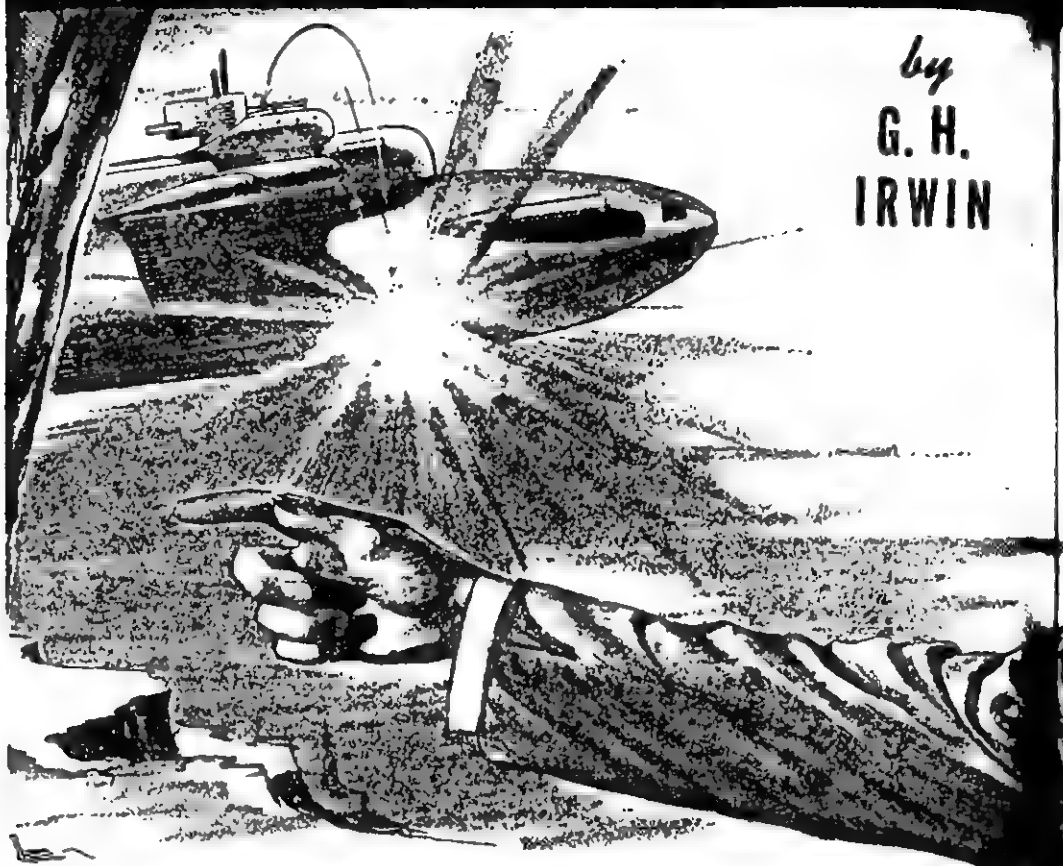

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lian's ship, and his disappearance, in the sea off the Maine coast. Estelle is badly injured, and a head injury leaves her insane. When Brand sees her, having been flown to her side by HAL ORSON, another patrolman, she screams of stars racing around, running away, of fools with little houses, etc. Apparently she has been giving him the runaround even while saying she loved him, simply using him for a diversion.

Brand joins the Special Service, after placing all his savings in a fund to care for her, seeking to uncover, against the wishes of Earth senators, Martian fifth column activity inside Luna. COMMANDER WILSON, his superior, advises against recklessness, but Brand says with a hard grin: "I don't die easy! And nobody'll make a sucker out of me again!"

Remembering this now, Brand swears to get Killian.

Three days later he arrives in the moon with two assumed names, one in the Special Service as Robert Wales, a political criminal; the other as Edgar Barnes, prospector. In this latter guise, he will ostensibly hunt the famed and very dangerous lu-bats inside Luna's caves.

At the port a lovely girl seems to recognize him, but masks herself immediately, and when he accosts her, puts him off coldly and disappears.

At the Star Club, Brand meets a man named ORMANDY, who holds him up with a steam pistol, tells him to walk out quietly and get into an aero-cab he will find waiting out front.

The mystery girl appears, kills Ormandy. Brand escapes in the aero-cab and forces the driver, obviously a cohort of Ormandy and a member of the fifth column he is seeking to uncover, to take him to the hiding place of the spies. A ruse works, and he maroons the driver at the bottom of a crater.

Killing a Martian guard at a cave entrance, Brand enters. He discovers three great Martian battleships in the Black Hole, famed bottomless crater, and is captured by a guard named SEWELL. Another guard named JOE escorts him to Jeffry Killian, who, it develops, is commander of Martian armed forces inside the moon, being readied for an attack on Earth.

Killian taunts him, promises him death, but hints first that he has several things to say and reveal. Confined in an underground prison, Brand hears a scuffle: a voice calls his name. It is Estelle Carter, who has regained her sanity through an accidental scare at the asylum, engineered by two companions, a maid, OLGA, and a patient, MISS PENNYFEATHER.

"Thank God, Martin, I've found you in time! I've been eating my heart out, wanting to tell you what a fool I've been and how sorry . . ."

Her hands tugged at him.

"Come quickly," she pleaded. "We've *got* to get away. Come, I know a way out. . . ."

She led him past the unconscious body of the guard she had slugged.

Now go on to the story's conclusion:

CHAPTER VI

Strange Reunion!

"COME, this way," Estelle Carter whispered. Her warm hand in Martin Brand's sent a strange shock to all his nerve centers. He was dazed, groping about in his mind for an explanation to this miracle that had come to him out of the dark.

"Estelle!" he whispered, still unbelieving. "I don't understand . . ."

"Never mind," she said tensely. "You've got to get away. Jeffry will certainly kill you."

They came to a dark opening in the basalt wall. She slipped into it, still pulling him along by the hand. They groped through inky darkness for nearly a half-hour, then a hollow booming echoed out of the distance from behind them.

"The alarm!" gasped Estelle. "They've discovered your escape! Oh, quickly! We've got to get out of this tunnel . . ."

She switched on a small flashlight, and in its light, began a stumbling run down the uneven floor of the narrow tunnel. Behind them the dull booming of the alarm, like a huge drum, or a

bell that has cracked, throbbed incessantly. Added to it were faint shouts, hollow and eerie because of the enclosed spaces.

Suddenly the tunnel opened on a narrow ledge, and beyond the light of the flash, Brand could see the abrupt blackness and the awful gulf that indicated the Black Hole. Off there, hanging in the darkness, he knew, were those three —or more—giant Martian battleships, waiting to surge up and out into space in destructive attack on Earth.

Estelle flicked off the flashlight's beam and left them in total darkness once more. Out here the booming of the alarm shrank to almost soundless proportions, swallowed in the vastness of the emptiness around them.

"Where are we going?" Brand asked.

"There are several small cruisers from the battleships anchored along the ledge, further down. If you can reach one of them, you can escape. They'll never find you in the crater."

Brand stopped dead in his tracks. In the darkness he reached out and clutched her arm. He drew her closer to him.

"What's all this emphasis on me?" he demanded. "If I do any escaping, you will do it with me."

He felt, rather than saw, her head shake.

"No, Martin, please. I must stay. Nobody will know it was I who helped you escape . . ."

Brand gasped.

"They *know* you're here?"

"Yes," she said lowly. "I realize it's hard to understand, but it's too long a story to tell you now. I came here, looking for Jeffry. I remembered, even after ten years . . ." she hesitated and he felt her shudder ". . . ten years in that madhouse, where to contact certain persons, and I got word to him. Then I came . . ."

He stiffened and his voice grew cold.

"You came back to *him!*" he exclaimed roughly.

She stepped close, abruptly, and her warm body pressed against his and her arms went around his neck. Her breath was hot and sweet in his face.

"No!" she said fiercely. "Please, no! Don't believe that. But he left me to die, ran away like a coward. He'll pay for that! *That's* why I came to him. He thinks I love him, but he'll know very soon that I don't!"

Estelle's lips met Brand's and pressed fiercely, passionately. Almost without conscious volition, he responded, clutching her in his arms tightly. Then he pushed her away.

"My God!" he said h o a r s e l y. "What's happened to you? You can't do that! You come with me. We'll get him another way. When I get back to Commander Wilson with the news I've got to tell him, there'll be action, pronto. We'll bottle up this invasion fleet, and smash 'em . . ."

She stood straight before him.

"No," she said firmly. "I'm not going with you. You can believe what you want about me. I know I treated you shamefully, and I know I deserved to lose your love. But whether or not I ever win it back again, I am going to pay off Jeffry Killian for what he did to me. You, nor anyone else is going to stop me. And now, come on to those cruisers. Another few minutes, and they'll realize we aren't in the caves, and they'll come out here. If they find us . . ."

She whirled and he heard her making her way along the rocky wall. Dazed by the cold fury and deliberate intent in her voice, Brand followed, hugging the rough basalt to avoid pitching into the Black Hole's depths.

Something inside him felt like a lump of ice. It was almost a sense of fear

—fear of this woman he had once loved, who had come to him now with such intense bitterness that he was appalled. But surging through him, too, was a hot emotion that he fought helplessly to thrust down. It made him speak to her now . . .

"Estelle . . ." he choked.

She stopped. He bumped into her. His arms closed around her convulsively.

"Estelle," he said hoarsely. "Is it really you? Are you really all right?"

For an instant she was still in his arms, then she spoke.

"Don't be a fool," she said coldly. "After what I did to you, are you going to let my appeal sway your reason? Don't you think I know my powers there? If, after this is all over, I can prove to you by other means that I deserve you, maybe . . ." her voice softened an instant, then hardened again. "How can you be so stupid as to think I might not betray you once more? Perhaps I have other motives, not good for you at all, in helping you to escape. Perhaps I intend only to do harm to Jeffry Killian by releasing you, simply because it wouldn't be a good thing for him for you to get away. I tell you, I hate him, and I intend to pay him off!"

He gasped. But he had no answer to this amazing series of statements. Slowly he withdrew his arms from around her.

"Maybe you're right," he said with a curious inflection in his tone. He felt a slight surge of something inside him that might have been anger, and yet was not. Rather it was resentment. What she had just said somehow went against his grain. It made him feel like a puppet, a helpless bystander, and placed her before him as a force that would sway him as it willed. Suddenly he rebelled.

"Yes," he said. "Maybe you *are* right. And if you *don't* intend to betray me, no harm will be done if I admit you might, and guard against it. So, since the job I'm doing here is bigger than either of us, and certainly bigger than your personal vengeance, I'm going to take you at your word. Besides, I think my score against Killian is bigger than yours, and I say he's mine! I swore I'd get him, and I will. Show me those cruisers."

HIS eyes narrowed a trifle in the darkness, and his lips tightened around jaws that were firmly clenched together. He fought down the emotions that battled within him, the almost overpowering desire to believe what he wanted to believe about this amazingly warm and human, and yet terrifyingly chilling woman before him. But they were there, those emotions, and they brought back once more that curious exaltation that he always felt when going into battle, but this time, it wasn't the bitter exaltation of the past ten years paced by the maddening thunder of Wagner's music. The thunder was in his blood, in a sudden uncontrollable beating of his heart. All at once he grinned in the dark . . .

Up from the immensity beside them shot a bright spark, leaving a trail of lesser sparks behind it that died as they drifted. Then abruptly a brilliant light burst forth, and a glare filled the whole crater, lit the walls about them with eye-blinding brilliance.

"Run!" Estelle burst out. "They've shot up a flare from the battleship!"

From the tunnel behind them came shouts, but as Brand turned, no one was in sight. They ran. Plainly revealed before them, anchored to wooden docks fastened to the sheer crater wall, were several small cruisers.

They reached them as a group of men burst from the tunnel. Estelle was

ahead, and out of their sight. But they saw Brand, and a barrage of white lances leaped out at him from their steam guns. But the range was too far, and they fell short.

Brand's boots rang on the planks of the dock, and he ran toward Estelle. He reached out for her.

"Now," he panted. "You're getting in with me and we're off . . ."

She slipped out of his grasp. In her hand appeared a tiny steam gun.

"No!" she said coldly. "Get in and go."

He eyed her a second.

"You won't shoot," he decided with a grin. He leaped forward . . .

A lance of white leaped out, and the planks at his feet curled and crackled in flame and splinters. Amazed, he lurched to a halt, drew back.

"Get in!" she screamed. *"Before it's too late!"*

THE shouts of the men from the tunnel were close now. Brand hesitated one single furious second, then plunged into one of the cruisers and slammed the cowl shut. Out of the corner of his eye he saw her leap into another.

But he had no time to be surprised at this new maneuver. He shot the cruiser into the emptiness beyond the dock. Lances from steam guns were piercing the darkness around the cruiser now, while above the flare faded and died. Behind him, the cruiser piloted by Estelle bore at him. Its bow gun flamed fire, and a blast of energy seared past him.

"Damn!" he swore in shock and surprised anger. *She was shooting at him!*

With wild rage in his heart, he slammed the throttle down to the floor, and whipped the tiny cruiser into the black depths beyond the great battleship and in an instant he was lost in pitch blackness that was broken only by the faint flash of steam guns far behind on the ledge. He had gotten away, clean! Even from the treachery of Estelle!

Burning anger seethed through him as he set the automatic black-light pilot in operation. That would prevent crashing against a crater wall, even though it was hundreds of miles to the other side. As the cruiser rushed on in the blackness, his thoughts calmed. With curious certainty, he realized that the blast from her bow guns had been deliberately close, yet far enough to harmlessly miss him. He knew abruptly that if Estelle had wished, she could have blasted him completely. She had missed intentionally.

And now, she was back there, probably docking again, to report failure in stopping him. Then she'd carry out the cold words she had spoken to him, return to Jeffry Killian to carry her vengeance to the chilling conclusion that Martin Brand knew suddenly she would. In spite of the memory of her loveliness, the recollection of the soft warmth and allure of her body, Brand shuddered.

"My God," he whispered. "What's happened to her?"

CHAPTER VII

Lost Inside Luna

BRAND turned off the motors of the cruiser and drifted silently along in the perfect blackness of the Black Hole. Vainly his eyes tried to pierce the gloom, tried to see either a light, indicating an exit to the surface, or a distant rock wall that might glow with phosphorescence and allow him to follow it to an opening back into Luna's interior.

Right now he was somewhere in Luna's crust, which ranged from five

hundred to a mere two hundred miles in thickness. A frown grew on his face, and a sense of dizziness swept over him momentarily as he discovered that he couldn't determine which was up and which was down. In fact, he floated aimlessly in emptiness so utter and complete that he had absolutely no sense of direction, if such a thing as direction had ever existed.

Suddenly he knew the reason for the legends and terror attached to being lost in the famed Black Hole—for he realized now that he *was* lost. Out in empty space, no matter how vast it seemed, there were always stars—millions of them, and all recognizable in their formations, so that direction was merely a matter of a star map. Here, in utter blackness, space lost its immensity, became a black shell that pressed hard against one, almost directly upon the eyeballs. And beyond it was nothing—not even in imagination.

In spite of himself, an eerie sensation of terror crept over him. His hands remained calm, and his thoughts crept deliberately over his problem, but the hair on his neck rose in unexplained terror. The Black Hole was demonstrating its most terrible feature—its ability to immerse those lost within its immensities in awful mind-chilling panic.

"Steady, Martin," he told himself. "The wall of this thing is right behind you, back where the docks are."

Even as his voice sounded muffled in the cockpit of the tiny cruiser, Brand knew that "behind" was just another word. He didn't know which direction *had been* behind. Now it was just the other way from ahead.

He shot back the cowl of the cruiser, sat there breathing the heady atmosphere of Luna's interior. It seemed curiously rare here, and he grinned suddenly.

"That's it!" he exclaimed.

For a moment he drove the ship at high speed, having once more closed the cowl, then he shut off the motor, opened the cowl, and breathed deeply. The air was rarer than before!

"Up!" he said exultantly. "Who's lost!"

Carefully he noted the calibrations on the meters on the control board, then swung the ship around in a one-hundred-eighty degree arc. Again he opened up the motor and blasted through the blackness.

A half-hour later the rockets ceased firing.

THE enormity of the catastrophe that had happened to him dawned on him with a rush. The cruiser still hurtled along at high speed, but it would gradually slow down, then it would drift toward the nearest crater wall and land there. From then on it would be a matter of making his way on foot.

On foot! In the Black Hole!

He looked hopefully at the fuel indicator, pounded it with his fist. But the needle remained stationary at the empty mark.

"I hope they're as careless with those battleships!" he growled angrily.

He settled back in the seat, helpless to do anything but scowl at the dimly illuminated instrument panel. He took mental stock of his situation. He had no weapons on his person, but he did have a gun mounted in the bow. Too heavy to detach and carry.

He fumbled about the interior of the cruiser, but it was tiny, and obviously never intended for fighting purposes. There were no other weapons. Further, there was no food, no water.

He had no flashlight, and without a light, walking *anywhere* in this giant

crater would be a suicidal undertaking.

For several hours he drifted aimlessly, fretting at the inaction. His speed, according to the indicator, had dropped to a mere eight miles per hour. He might drift endlessly at that rate, depending on his direction in relation to the walls of the Black Hole.

But even as he debated on this possibility, he was hurled forward in his seat as the cruiser crashed into solid rock. Even at this slow speed, the shock was abrupt, although not enough to injure him. After the noise of the crash was gone, silence was complete. The lights on the cruiser had gone out. All that gave indication of life was his own breathing, loud in his own ears.

Brand leaned forward in the darkness, fumbled at the instrument panel. He swore feelingly several times, but when he had finished, he came up with a dashlight, wrested whole from the panel, a handful of wire torn from its bowels, and several batteries.

It took fully fifteen minutes to connect them up, and the result was a dim glow that spread radiance only a few feet in each direction, but it was enough to see that he had crashed on a barren rock surface. And judging from the weight of his body, about twenty-five pounds, he was at the moment perched precariously on the steep perpendicular wall of the Black Hole. In relation to the moon itself, he was actually standing at right angles to the perpendicular. Gravity was a peculiar thing on this hollow world!*

THEN he climbed out of the cruiser and walked to its bow. A moment he considered, then began walking slowly forward in the direction the bow indicated he had been traveling when the cruiser had struck. That way would be "down" toward the interior of the moon. Walking was a difficult task, in the light gravity, and more than once he found himself twisting helplessly in the air, while he floated gently back to the surface again after an especially vigorous and ill-advised step.

Behind him, in the darkness, he heard a faint rustling, a swish of moving air, and he turned awkwardly. There was a rushing sound, growing in the dark like the nearing approach of some huge body, and the skin crawled on his scalp. But the dim light he carried only served to accentuate the darkness beyond its range, and he could see nothing.

In desperation he tore the wires loose from their connections, and the light went out. As it did so, the cause of the rushing wind became obvious. Swooping down, almost upon him, was the dreaded, faintly-glowing body of a lu-bat!

Before he could dodge its attack, a curiously light but strong body crashed into him, and cruel talons dug into his flesh. A pair of powerful tentacles wrapped around him, and with a dizzying rush he felt himself carried aloft at terrible speed.

For a moment, the pain of the talons clutching him, and the shock of the attack, had dazed him, and when he recovered his senses, he realized that he was being carried to some unknown destination at express-train pace. He had no doubt as to what this destina-

* Conceive of the moon as a walnut shell, with the meat removed. The Black Hole would be a pin-hole through the shell itself, and Martin Brand's present position would be standing on the wall of that crater, perhaps midway through the shell. Thus, the gravity attraction of the moon's mass, insofar as he would be concerned, would be the wall at his side, or, as the case really is, beneath his feet. If he were on the surface of the shell, he would have changed his gravity direction by 90°. This weird arrangement sometimes makes for a violent form of "gravity" sickness, much akin to sea sickness, and the vertigo induced by a swift roller-coaster ride.—Ed.

tion was—the nest of the lu-bat! And the purpose, food for young lu-bats!

He became aware that he still clutched the wires from his makeshift light in his hand, but the light itself, and the batteries, were gone. He was about to drop the wire also, when a thought struck him. A grim smile played around his lips as he squirmed around and peered up at the scrawny neck of the lu-bat, bobbing up and down as the beast flew through the increasingly heavy lunarian atmosphere.

"You'll never get me to that nest!" he vowed softly. "Because where I go, corpse or not, you'll go too!"

With a painful effort, he slung the loose end of the wire around the lu-bat's neck, and tied a secure, but loosely looped, knot in it. Then he removed his empty steam-gun holster from his belt, inserted it in the coil of the wire, and twisted it slowly until it began to tighten around the neck of the lu-bat like a tourniquet.

Then, hands on the holster, he waited. Killing the creature now would mean dashing himself to death when they crashed to the surface. Waiting, he could apply the pressure, and it would be a battle to the death. If he won . . .

His jaw tightened.

"The luck of Suicide Martin Brand will have to be better than it ever has before," he whispered softly to himself.

THE giddy swaying of the lu-bat's motion was beginning to make him very sick, and the pain of the creature's talons was becoming intense. He could feel blood running down one side, as the cruel claws pierced his skin. He used one hand to tear at the tentacles holding him, and they tightened. But the talons loosened, released him altogether, as the lu-bat became aware of his efforts, and concentrated on wrapping him more tightly in the tentacles.

Brand gasped for breath, desisted his efforts. If this was any indication, the lu-bat was going to have all the better of the strangling contest that would begin the moment he tightened that tourniquet.

Below his feet, Brand saw a faint glowing spot, and he peered intently. The rush of wind in his eyes prevented accurate observation, but suddenly he identified it.

"A city!" he exclaimed.

The tentacles around his body tightened convulsively. His explosive utterance had alarmed the lu-bat. Blackness washed over his vision in a wave that was not the blackness of the Black Hole.

When he could see again, the dim spot of light was gone. It was only when he relocated it off to the side a few minutes later that he realized the lu-bat had changed course. All at once Brand noticed a difference in the darkness. There was a sharp line where pitch black ended, and a slightly lesser degree of black began.

The edge of the Black Hole!

He was *out* of the pit of lost men! He was being carried by the bat through the atmosphere of inner Luna itself!

Then he noticed that the black rim was sliding upward a bit, and coming nearer. The lu-bat wasn't emerging from the pit, but merely heading toward what was possibly its lair somewhere along the inner edge of that rim. As they drew nearer, Brand tightened his grip on the steam-gun holster, and readied himself for a quick series of twists that would tighten the innocuous, but deadly strand of wire around the beast's throat.

The lu-bat slackened speed, hovered an instant over a ledge. Brand saw

the darker opening of a small cave that slid smoothly downward. Undoubtedly the bat's lair, and perhaps an impossible place out of which to climb. In quick determination, Brand twisted frantically on the tourniquet. It was now or never!

The wire loop sank out of sight in the leathery neck of the lu-bat, and a fearsome *squawk* was cut off in a screaming gurgle. Instantly Brand found himself the center of a cyclone of pain and swirling action.

THE tentacles tightened convulsively around him, and he felt a rib crack with agonizing torture. His head seemed swelling and about to burst. The air rushed out of his lungs as though he were being smashed beneath a steam roller. The talons of the lu-bat sank into his shoulder and cut deep.

Grimly, almost fainting, Brand continued to twist, then stopped, conscious in the whirlwind of tossing and floundering around that too much twisting might snap the wire and allow the pressure to be released.

He hung on, managed to slip one end of the holster beneath the loop of the knot in the wire itself, so that it would not spin around and loosen the tourniquet when unconsciousness would cause him to lose his grip.

He felt the huge beast smash into the ground. One leg went numb with the blow. One hand was torn from his grip on the holster, ground against a rocky surface that shredded his skin.

Tremendous shocks buffeted him as the lu-bat flopped around exactly as does a chicken with its head cut off. Then he felt himself hurled fifty feet through the air and, despite the low gravity, landed with a stunning, bone-breaking crash at the base of the wall that marked the inner edge of the ledge. He felt his body slipping slowly over the edge of the lu-bat's nest, glimpsed below him the yawning mouths and the staring eyes of a dozen small lu-bats, lunging about in excitement and anticipation of the feast that awaited them.

Frantically, with his last conscious effort, Brand clawed his fingers into the creviced rock and tried to drag his body back from its precarious position. The tremendous thrashing of the dying parent lu-bat raised a din in his ears that kept him from the brink of unconsciousness for the moment, but then he found himself going limp, and his fingers released their grip. He slipped down . . .

A tremendous blow from the lu-bat's wing smashed into him, and the lu-bat flopped down past him into its lair. Brand was almost unaware of the tremendous commotion that resulted below him as all went black and sound was blotted out by terrible silence.

CHAPTER VIII

Awakening—and Surprise!

MARTIN BRAND became aware of his surroundings in a very unsatisfactory manner—to him. He discovered that it was distinctly no pleasure to awake to find every limb aching, his head feeling as though a dozen imps were pounding on his skull with red hot hammers. He was obviously lying in a bed.

But there was one thing that was certainly not painful. Instead it was strangely soft and cool and caressing. And it ran soothingly across his forehead in a gentle way that reminded him of a woman's fingers . . . and he opened his eyes to discover that they *were* a woman's fingers. *The* woman's fingers!

Looking down in his eyes were the cool blue ones of the mystery girl, the girl who had killed a man to save his life—for no reason at all.

He closed his eyes.

"No," he whispered to himself. "I'm lying in a hole with baby lu-bats picking my bones clean. I can't be in a bed, with *her* nursing me. It just isn't logical."

"But it's true," came her calm voice, soft and melodious. "You *are* in a bed. I *am* stroking your forehead, and the lu-bats *aren't* picking your bones . . . because I got to you before you fell to them and pulled you away."

He opened his eyes again.

"The luck of Suici . . ." he shut his lips tightly, suddenly. Then he went on, covering up his near slip. "The luck of Satan himself must be with me."

"Yes, Martin Brand," she said. "Your luck is still holding out. No need to look startled, or alarmed. I know who you are, and why you are here."

Brand lifted himself on one elbow and groaned.

"Damn!" he said feelingly. "I'm all busted up."

He sank back again, continued what he had been about to say:

"You know an awful lot. Too much, in fact. Just who are you, anyway?"

"My name," she said, "is Kathleen Dennis. My number is 28. And my sector is 24A, Luna. You have two broken ribs. We are in my ship somewhere near the Liebnitz mountains and a small crater near the Black Hole. And you are going to stay right where you are until you are able to get back to work."

He stared at her.

"That's just dandy! And who says so?"

"Commander Wilson."

"Do you mean to tell me," he asked wonderingly, "that you, a woman, are in the Special Service, and working on the same problem I am?"

She nodded.

"Is that so unusual? Don't you think I can handle the job?"

"So far," he said wryly. "I'm in no position to deny that. And I'm rather relieved to know you killed Ormandy because he had me on the spot. I had you ticketed for a lot different set-up . . ." he stopped, and his eyes narrowed slightly ". . . maybe it *is* a different set-up!" he finished.

"You mean you don't believe my story?"

He looked at her steadily.

"Personally, I'd like to, but actually, I'd be a fool to. You may be one of the gang, but just the same, your orders don't go with me. I'm getting up right now, and doing a little sending over your radio."

BRAND tossed back the covers, grimacing with the pains his motions brought to his attention, tried to get to his feet (which he discovered were bare) out onto the floor. He was clad in brilliant blue pajamas, certainly not at all intended for the male sex.

"You've certainly taken some liberties!" he said with some confusion. "Or is the orderly out on an errand?"

"There is no orderly," she said. "And you aren't getting up. Nor are you sending anything over any radio." She put her hands gently on his shoulders and pressed him back on the pillows.

"Oh, yes, I am!" he said angrily. "It's a matter of vital importance. And if you don't let me get up, I'll have your hide!"

She crossed the tiny cabin, took his clothes from a locker, and walked to the door.

"You can have it," she said, "after you feel better. As for your 'vital'

message, I've already taken care of it. I radioed Commander Wilson of the presence of armed enemy ships in the Black Hole. He is sending in a patrol cruiser in a few hours."

"A patrol cruiser!" gasped Brand, sitting up in spite of the pain. "Good God, girl, that crater is full of *battleships!* The minute a cruiser shows up, it'll be blasted wide open. It'll never come back out of the Black Hole!"

She looked at him curiously.

"Do you really believe that?" she asked. "I told Commander Wilson you were babbling about battleships, but he was convinced you were delirious. Such ships could not possibly have gotten into Luna. They'd have to pass the fleet, and they could not have come down the entrance crater on Dark Side. There is no other crater through which they could enter."

"What about the one you just told me about?" he asked. "If you came out near the Liebnitz range from a crater that opens near the Black Hole, the answer is obvious."

She smiled sweetly.

"Too small," she said. "It's known only to the Special Service, and it's through that the patrol ship will go—with barely enough room. That's the main reason a patrol is being sent. The other is simply to check on your belief, however wrong, that there are armed forces in the Black Hole."

She moved into the doorway.

"Where are you going with my clothes?" he demanded, scrambling half out of bed.

"Somewhere where you won't be tempted to put them on and leave this ship," she said. "And too, I have work to do. I have to guide the patrol to the crater entrance. They don't know where it is."

She shut the door, and as he stared, he heard the lock turn.

"Damn!" he said loudly.

WITH a groan, he heaved himself erect, crossed to the door and rattled the knob.

"You crazy little fool!" he shouted. "That patrol ship will never come out. Let me out of here. I'll radio Commander Wilson myself."

There was no answer, and as he stood there, the ship lurched, took off slowly. He reeled back to the bunk and sat down, hung on until the ship leveled off. Then he got up again, crossed to the lockers and opened each one in turn. The first was bare; the other held a regulation space suit. He grunted, then with much labor, climbed into it. When he had completed his job of makeshift clothing, he removed the small crowbar from the belt of the space suit. He crossed to the door and inserted it between door and jamb. Then, sweating with the pain the effort caused, pressed until the lock sprang open and the door swung inward.

He gripped the steam gun from the holster in the space suit and walked unsteadily down the tiny corridor toward the control room. Here he found the girl seated at the controls. She was looking out of the observation window. There was another ship out there, a patrol cruiser. Brand recognized its sleek lines.

He stood behind the girl, leveled his gun.

"Okay, Kathleen," he said, his voice muffled in the space suit, "you can open up the radio key and send a little message to that patrol."

She whirled around, faced him. One amazed glance she took at the space suit, then she smiled.

"I forgot the suit," she confessed.

"I'd have come in the pajamas," he said grimly, "or without, if necessary. That patrol has got to stop!"

Her eyes narrowed.

"Why?"

"Because it's suicide!" he said angrily. He opened the face plate on the suit.

"Open that key," he demanded. "I'm in no mood to fool around."

She turned and pressed the key. Then she spoke into the transmitter.

"Twenty-eight calling Space Patrol N-twenty-seven."

The reply came instantly.

"Space Patrol N-twenty-seven. Ready for message."

BRAND leaned over, grasped the microphone in his free hand.

"Cancel that order to investigate," he said. "It's suicide. There are at least three heavy battle cruisers anchored inside, and they'll blast you to atoms in two seconds."

"What . . ." came a startled gasp from the patrol ship. "Battle cruisers . . . hey, wait a minute. I'll have to call Captain Craig." There was a moment pause, then the voice of the operator came in again.

"Who are you?" asked the voice, puzzled. "Is this the ship alongside?"

"Yes," said the girl. "I'm right here. At the moment I have a steam gun in my back. My patient has refused to believe I have orders from headquarters."

"I believe 'em," snapped Brand. "That's what's bothering me. I know what you fellows are going into, and I've got to stop it."

A new voice cut in.

"Captain Craig calling," the voice said. "What's the trouble, twenty-eight?"

"Captain," said Brand urgently. "This is Martin Brand. I've discovered at least three of Mars' biggest battleships anchored in the Black Hole. If you go in there, you'll be blasted out of existence . . ."

"What did you say your name was?" asked Captain Craig's voice with a peculiar note to it.

"Martin Brand," snapped Brand. "I am a Special Service operative, acting under Commander Wilson."

"Commander Wilson, eh? Whoever you are," said the radio, "land at once and prepare for boarding . . ." The radio went dead.

Brand stared down at Kathleen in surprise. Her hand was on the key.

"What'd you do that for?" he asked. "And what does he mean 'whoever I am'?"

Her face was white, and there was something in her eyes akin to terror.

"Martin," she said tensely. "Commander Wilson died four days ago of a heart attack! So, when Captain Craig questioned your identity, he had good reason. Another thing: Didn't you know that a public funeral was held for you when you became Robert Wales in actuality a week ago? Commander Wilson deemed it the wisest course, because he knew things were about to break. So when you said Martin Brand . . ."

Brand's senses whirled dizzily around him.

"You mean . . .?" he gasped.

"Yes. I lied to you when I said I radioed Commander Wilson. I did radio, but could only report suspicious activity in this locality. If this Special Service thing were to become known to the Senate . . ."

"Then Craig intends to arrest me?" questioned Brand harshly.

"Yes. And when he does, he'll arrest you as Robert Wales. You'll be exiled to Venus, perhaps, but that's better than being shot as a spy . . ."

Kathleen's voice was trembling strangely.

"I only wanted to save you from the terrible situation you are in . . ."

A MOMENT Brand stared at her curiously. Then he smiled.

"I'm not in a jam," he said. "Commander Wilson foresaw that something might happen to him, so he placed a complete record on file, to be opened in an emergency concerning Robert Wales, which will completely exonerate me and reveal me as a Special Service agent. It will even prove that my original conviction, under the name of Robert Wales, was a put-up job to conceal my true mission, and give me access to the plots and counterplots of the fifth columnists."

Kathleen rose to her feet and faced him, her face even whiter than before.

"No, Martin," she said, "you are wrong. There are no such papers. A week ago the Bureau of Records of the Special Service was completely wrecked by an explosion, and every document was burned in the resulting fire. I am the only other living being who knows you are Martin Brand, and I couldn't prove it. I can't even prove you are Robert Wales . . ."

For a long moment Brand stared at her in stunned surprise. Then, the tiny cruiser rocked as a shell exploded across her bow.

"We've got to land!" Kathleen cried. "They're shooting a warning over our bow!"

Abruptly Brand pushed her aside, slide into the control seat, ignoring the agony in his chest.

"Where's that crater opening?" he asked savagely. "Straight ahead?"

"Yes," she said, *"No! We're over it now!"* Her eyes were fixed on the observation window. "But Martin, please don't! They'll s h o o t us down . . ."

Below them Martin Brand saw the small, dark opening of the crater, and with a motion that hurled the girl into a corner in a heap, and pressed him savagely back into his seat with pain grinding in his chest, sent the cruiser hurtling down into its depths. The brilliance of sunlight was replaced by pitch darkness. It was lit momentarily by the brilliant flash of a magnesium-atomic exploding against the wall beyond him as the patrol ship took a desperate shot at him in a crippling attempt. The light showed Brand what he needed, and for the next six seconds he drove the cruiser down a narrow, slanting shaft with death at each elbow. Then and only then did he turn on the lights.

A scream came from behind him.

"Martin! We're going to crash! . . . This tunnel turns at right angles two miles down!"

Looming up a mile ahead was the wall of rock that seemed to be the end of the tunnel. Rockets roared and flame filled the crater shaft as Martin gave the decelerators everything the ship had. Blackness reeled in on him, but he hung on grimly, ignoring the pain in his chest that threatened to engulf him in unconsciousness.

Even through the walls of the ship the scream of the bow rockets was audible . . . and it was the last thing Brand heard before he sighed helplessly and eased down into a feathery oblivion—that and his own tortured voice whispering in agony: "Damn those broken ribs . . ."

CHAPTER IX

Fugitive!

IT was a dream. It couldn't be anything else. Waking in a bed, feeling a cool hand on his forehead, opening his eyes to stare up into the deep blue ones of the girl with the red hair —that had all happened before.

"How do you feel now?" Kathleen asked.

He looked up at her, brows puckered.

"I feel pretty good," he admitted. "But all this is a little cockeyed. It's happened before. And that isn't logical. Too similar. This time I'm only dreaming. I'll wake up and find myself lying in the bottom of a crater . . ."

He sat up, discovered that his ribs were still sore, but was conscious that all the agonizing pain was gone.

"Hey! I *am* awake! And this isn't a ship. It's . . ."

"It's a hospital, in Luna City," said Kathleen. "I flew you here after ducking the patrol in the crater shaft. They went on to the Black Hole to investigate. I found some papers in your clothes saying you were Edgar Barnes, prospector, and I told them I'd picked you up after having been attacked by lu-bats."

"How long ago was that?" asked Brand urgently.

"Oh, I brought you here over a week ago. You've been in a pretty bad way."

"I don't mean that!" exploded Brand impatiently. "How long ago since the patrol ship went into the Black Hole?"

"They went in immediately we eluded them. But no one in Luna knows it."

"Any report since?"

"None. I had to hide my ship in a crater. Besides, the radio got smashed when we hit the wall . . ."

"Hit the wall!"

"Yes, but not hard. You had the ship nearly stopped when we reached the turn in the crater shaft."

"You took over from there, hid from the patrol, and took me here, concealing my identity?"

"Yes."

"Do you know what you've done? You've aided a criminal to escape. You've placed yourself in a situation as impossible to explain as my own. I'm a nobody now. I'm dead and buried Even my mock-personality is non-existent. I am an assumed name which can't hold up a minute under inspection, with the strange angle that when the fraud is discovered, there's no real name to tack to me. I'm the living example of a nonentity!"

"Yes," she said. "I know what I've done."

"Why are you doing it?" he asked bluntly.

SHE looked at him a long moment, then she spoke slowly.

"First, because it's part of my work. I have a job to do. And I have to do it much as you had yours to do. And now, with the situation the way it is, the whole thing is left up to me. But my best reason is because I love you."

Brand sat bolt-upright in bed.

"What!"

Her eyes met his steadily.

"For ten years I've admired you—no, longer! I think I loved you, in a worshiping, little-girl way even before your intended marriage. I was happy when I thought you had found your happiness. And I cried when she jilted you. I've cried many times since then—every time I heard another story of 'Suicide' Martin Brand and his reckless exploits on the space lanes. Everybody called you a lucky fool, a fighting daredevil who always seemed to bear a charmed life, who always won what he fought for. But I knew the real drive behind you. I knew the unhappiness that filled you, the hurt you were trying to hide, the ache you were trying to kill, and the memories you were trying to forget.

"I joined the service simply because I loved you, and I wanted to find you, and follow you, and meet you . . . and try to take the place of that, that . . ."

She paused and her eyes fell finally.

But she went on:

"Once I almost met you. It was in a bar. You were drunk, and I was sitting nearby. You were too drunk to notice anybody. And I heard you say something that proved all I knew about what really goes on inside you. You said, to no one in particular, because you were alone: 'I wanted a woman; a woman who could ride the stars with me when I wanted to ride, or who would sit with me in a little cottage on the sea shore. But she ran away with a racer . . .' When you said that, Martin, I discovered I wanted to be that woman . . ."

Her voice ceased, and her eyes lifted again, looked at his.

For a long moment there was silence while he looked at her, while he fought for something to say. Then it was she who spoke.

"I know I'm making a fool out of myself, but what I've said had to be said now, because I think it will be the last chance I will ever have to say it. I'm going now, and I won't see you again. You had better go too. Your work is ended. You must leave here, because even if no one on Earth will believe who you are, there are people here who know, and they will see that you are removed."

"You crazy little fool," said Brand chokingly. "You crazy liittle fool. Somebody ought to spank you." He swung his legs out of the bed and stood up. "Call an orderly. I want my clothes. I'm getting out of here right now, and I'm damned if I'm going to run away. Commander Wilson is still my boss, and he gave me a job to do. I'm going to do it, if I can!"

She stood staring at him.

"Please," she pleaded. "You must go away. You can't do anything. Even if you found out the truth, you couldn't make any Earth official believe it . . ."

"Then I'll do it myself!" said Brand. "I *know* the truth! That Black Hole is filled with Martian battleships, and they'll be coming out soon to blast at Earth. Then it'll be too late. And why you, who are supposed to be on the same mission I am, keep insisting on letting that happen, I can't understand. If you say you know me so well, and are in love with me, which is the wildest thing I ever heard of, then why don't you help me, instead of hindering me?"

Her face burned to a slow red. Then she spoke, and her voice was level.

"I'll send an orderly. Put your clothes on and meet me in the lobby. We're going to the Black Hole . . . *together!* And if you can show me those battleships . . ."

She whirled and almost ran from the room while Brand stared after her in amazement and bewilderment.

IN a few minutes the orderly came, and Brand asked for his clothes.

"I'm leaving," he said. "Please have my bill made out . . ."

"It's been paid," said the orderly.

Brand flushed.

"Then get my clothes," he barked. "I'm in a hurry."

Ten minutes later he walked down the hallway, rather unsteadily, but with growing strength as he regained a surety of step. He went down in the elevator, walked into the lobby. He glanced around, but saw no one.

Two men were advancing toward him. One was dressed in the uniform of the Lunar Police. The other was the taxi-driver Bran had marooned in the crater-bottom near the Black Hole.

"You're under arrest," said the Lunarian officer.

Brand's eyes narrowed and he tensed himself. He eyed the taxi-driver who now was dressed in civilian clothes and stood looking at him with a strange

calmness in his manner, a peculiar glint in his eyes.

"What for?" asked Brand.

"For theft, for attack with intent to do great bodily harm, for kidnaping, and if that isn't enough to hold you, for murder," said the officer. "Put out your hands."

There was a pair of handcuffs in one hand, and a steam gun in his other. It was leveled straight at Brand's heart.

As Brand put his hands out reluctantly, there came a slight hissing. The light globe in the ceiling shattered, and the room was plunged into darkness. Brand hurled himself instantly to one side. A brilliant lance of white pierced the spot where his body had been. Brand stumbled over a chair, picked it up and hurled it savagely at the spot where the officer had been standing. There was a thud, a muffled curse, and the sound of a falling body. But Brand wasn't waiting to hear more; he was plunging toward the door, which was dimly lit from the street lights outside.

Without bothering to open it, he hurled his body, head shielded in arms, straight through the thin plastic-glass. It shattered with a crash, and he fell to the sidewalk outside. Parked at the curb was a taxi. Brand hurled himself into it. With one savage blow he knocked the driver unconscious, then dumped him over the side.

From somewhere down the street a white flash came. The glass of the windshield shattered and frosted weirdly under the effect of the intensely hot steam bolt from a steam-gun. But Brand had the taxi under way now, and it hummed into the air, flashed around the cornice of a building, and roared upward into the darkness of inner Luna.

BEHIND him a fast ship, not a cab, was climbing in pursuit. Brand realized it was a police flier. Obviously the vehicle of the officer who had come in to arrest him, with a fellow officer in it. Apparently the sudden egress of Brand from the hospital, when they had expected to arrest him in his bed, had caught them a bit unaware.

The ship behind was faster than the cab by far, but Brand had gotten a good start, and now, against the pitch black of the inner world's eternal midnight sky, Brand knew it would be a difficult job to spot him. He made sure every light was out, then sent the cab hurtling on a tangent. Three times he changed directions, then zoomed down close to the rocky surface and slowed down so that his motor roar became a dull humming. He searched the black vault above him with keen eyes.

Nowhere in sight was the pursuing ship. Brand grinned a bit, but sobered instantly.

"Those Lunar police are no fools," he said. "He's probably doused his lights too, waiting for me to come up again after I think he's gone."

Brand studied the faint lighted spots that indicated Lunar cities, far above on the other side of the hollow ball, tried to determine his whereabouts. Finally he nodded grimly, then sent the taxi humming toward the north of Lunar City. If he was correct, off there he would find a familiar crater . . . .

A half-hour later he was sure his directions were right. He rose higher in the air, and increased his speed. Ahead loomed the black spot that was the crater. And abruptly a brilliant beam of light bathed his ship in its rays. Behind him the police ship bore down on him.

"Right!" gasped Brand. "He *wasn't* so dumb. That guy's a real policeman!"

There was admiration in his voice, even as he shot the taxi down at the limit of its speed, straight for the edge

of the crater. He looped over it fast, dropped down like a plummet. Then he leveled off and landed on the now-familiar ledge. He whirled the wheel of the cab, faced it on an angle toward the farther edge of the crater, stepped out, and shot the motor button down full. He dropped to the ledge in a heap as the taxi roared upward and away. It raced out of the crater like a meteor, its exhausts visible now with its tremendous speed, and Brand grinned.

He dropped behind a boulder and waited. The police ship roared over the edge of the crater, spun violently to avoid a collision, then looped to follow the hurtling, driverless taxi. Both ships bore away on a straight line at tremendous speed, and Brand chuckled.

"He thought I intended to drive him against the wall with that maneuver. Now he'll follow until he gets me!"

Behind him there came a shout, and he turned to see armed men pouring from the tunnel at the base of the ledge. They had seen him land, and were after him!

BRAND rose to his feet, ran back into the shadows along the crater wall and raced along pantingly. Around him bolts from steam-guns were hitting. He ducked low, unable to fire back. He had no steam-gun this time. It hadn't been with his clothes. But a sudden memory staggered him in his stride, and he plowed to a halt, retraced his steps several yards, anxiously scanning the base of the crater wall where it met the floor of the ledge. His pursuers, amazed at this inexplicable maneuver, slowed down; several dropped behind boulders.

Then Brand saw it! The atomic rifle he had taken from the Martian guard he'd killed the first time he landed on this ledge!

He seized it, dropped flat on his stomach, and sighted at the advancing men. Brilliant explosions rocked the ledge. Several men went down like stricken sheep. Brand fired quickly, methodically, and in a moment the ledge before him seemed deserted. All of his attackers who had not been killed, had hidden themselves as effectively as possible.

Brand laid down a thundering barrage of shots that blanked out the ledge in waves of smoke and dust, then he leaped to his feet and ran back the way he had originally been heading. In the black shadows he almost ran into the aero-taxi where he had hidden it. With a thrill of thankfulness he climbed into it, slid into the driver's seat, and sent the craft humming into the darkness of the crater, hidden from view of the men on the ledge by the smoke that still hung thickly around the scene of the exploded atomic shells.

A moment later he was over the edge and speeding forward toward the Black Hole.

"Now to find out about that patrol ship," he said grimly.

CHAPTER X

Estelle Carter Once More

IT was obvious that the system of caves through which he had traveled originally to reach the Black Hole hiding place of the giant Martian battleships was located between the crater he had just left, and the Black Hole itself. Therefore the Martians would be anchored directly below him and perhaps only four or five miles down.

That hunch proved correct as Brand allowed his aero-cab to drift slowly down in the inky blackness. Because suddenly, almost so close that he grazed a giant hull, loomed the bulk of the tremendous vessel.

Brand stopped the car short, hung motionless under the belly of the great, deadly fish of space. He could see its bulk dimly, stretching for a thousand yards in each direction.

Somewhere off to his left would be the wooden docks where the small cruisers were located. Properly fueled, those ships would be much better than the futile, unarmed aero-cab. Against the giant battleships, they would be as impotent as a mosquito, of course, but Brand had no intention of attempting anything so futile.

He moved the aero-cab slowly along under the belly of the monster ship, noting the huge bomb racks with their gaping openings. Those racks could rain down concentrated destruction on an Earth city that would wipe it out in one titanic holocaust. Those bombs were atomic bombs, just as were the bullets in his atomic rifle. And their action, on a tremendous scale, was as correspondingly terrific as the bullets had been back on the ledge.

Those bombs must never be loosed on Earth!

He sent the aero-cab toward the wooden docks, and reached them in pitch darkness. With some unavoidable bumping around, he managed to make the cab fast and climbed onto the dock. He couldn't see whether there were any cruisers tied up there or not.

"Can't risk a light," he muttered.

He dropped to his hands and knees and crawled along the docks, so as not to stumble off into space. At each mooring post, he felt for a cable that would indicate a cruiser was moored here.

Finally he found one. The gangplank was down, and in a moment he had opened the lock and stepped inside. This ship was considerably larger than the one he had escaped in before. It was at least a ten-man cruiser, and when he had closed the lock, he fumbled for the light switch and snapped it on.

Lying on the floor at his feet was the body of a Martian guard, his face seared away by a steam-gun blast, and his body lying in a pool of blood!

"My God!" exclaimed Brand in stunned surprise.

What did this mean?

SWIFTLY Brand snapped off the lights and stood still. Was there anybody else on this ship? He listened intently, but heard no sound. Softly he made his way forward. This cruiser would have radio—and it was the radio he wanted to find. He reached the control room door and opened it softly. It was dark inside. He fumbled forward, closing the door behind him, then groped forward.

Behind him a flashlight beam lanced out, caught him full in the back. His own shadow loomed gigantically against the control board ahead of him.

"Don't move," said a chill feminine voice. "Raise your arms into the air slowly."

"Estelle!" he gasped, and whirled around.

"Martin!" For an instant the voice held unutterable shock, and she stood as though paralyzed. He couldn't see her face distinctly behind the brightness of the flashlight, but for a infinitesimal fraction of a second, he thought he saw annoyance mirrored in her tight lips.

Then abruptly she snapped out the flashlight and was in his arms, her lips pressed against his passionately, devouringly. She was sobbing.

"Oh Martin, Martin, I'm so glad you've come back. I'm in terrible trouble . . ."

Brand stood there, holding her in his arms tightly, a strange tumult in his breast.

"Estelle . . ." he choked. "I . . ."

He was baffled, bewildered, and strangely perturbed. The soft shaking of her shoulders and the hungry pressure of her lips stirred him as nothing had ever stirred him before. But even in the confusion of it all, he remembered the near-miss of her guns as she had tried to shoot him down as he escaped into the Black Hole.

She must have sensed the doubt in his half-yielding lips.

"You thought I was shooting at you?" she questioned tearfully. "I *wasn't,* Martin. I only wanted to make it look as though I was trying to get you. So that Jeffry Killian would trust me when I came back to him . . ."

His hands were on her shoulders, holding her at arm's length.

"Came back?" he asked. "You mean you wanted him to believe you were a friend, and your real intention was revenge?"

"Yes," she said lowly. "I hate him. More than I love you, if that's possible. I wanted to kill him; torture him slowly first, then kill him just as slowly. But I . . ." she paused.

Brand tried to see her features in the dark and failed.

"What did you say?" he whispered hoarsely.

"I wanted to kill him . . ." she began.

"No, no! You said something else . . ."

She lifted his hands from her shoulders, pressed close to him, and this time her lips kissed his cheeks, his lips, his nose, and finally buried themselves at his neck.

"I said 'as much as I love you'," she whispered. "And I *do,* Martin! Oh, I do! So very much . . ."

A FIERY exaltation was suddenly surging through Brand's veins, and there was exultation in his voice.

"Thank God, Estelle, I've gotten you back at last! I've been going mad for ten years, with hunger for you, with memories . . ."

He kissed her lips tenderly. Then he stood erect and gripped her arms tensely.

"You said you were in trouble! What kind of trouble? Who killed that Martian soldier in the corridor?"

"I did. I had to. He was guarding the cruiser—they've put a guard on everything now, since your escape."

"But why?" asked Brand. "What was so urgent on this ship that made you kill a man to get into it? Were you running away?"

"No. I wanted to send a radio message, and this is the only way I could do it without Jeff finding out where it come from, or who sent it."

"A message to whom?"

"To Commander Wilson. I knew he was your superior officer, and I had to know if you had escaped, and what you were doing. There's so much happened since you're gone! Martin, they're almost ready! The attack will come any day now!"

"Estelle," said Brand soberly. "I'm afraid there isn't much I can do about it. I'm in trouble too, and there's no way out. You see, Commander Wilson is dead. So is Martin Brand, officially. And in my identity as Robert Wales, I am a political criminal, and all record of my work as a Special Service agent is destroyed. I'm nobody, Estelle, except a nameless prospector wanted for murder by the Lunar police. I've got a job to do, and no one to help me do it. I've got to work entirely alone."

"What are you going to do?" she gasped.

"Just what you intended to do," said Brand. "I'm going to use that radio. But first, you must tell me something.

Has there been any action down here? Has an Earth Patrol ship investigated? And if so, what happened to it?"

She shook her head.

"No. I'm sure of it. There has been no disturbance. But I do know that several more battleships have arrived, and many transports. They are strung in a long line straight down from this anchorage. They have sufficient force to invade Earth and subjugate it. The moon will be a simple matter. One battleship and one transport can take over the Lunar cities at will. The battleship will anchor at the center of the moon, command all the cities at long range, and blast those that refuse to surrender.

"The Martians will take over all the space ports, and fifth columnists will aid in this work. Jeff said there were two hundred thousand fifth columnists waiting for the battleship to emerge and destroy the main entry shaft. That will be the signal for the fifth column attack."

"But that's suicidal!" said Brand. "How will they get the battleships out of the moon to attack Earth, with the main entry shaft gone? That's the only crater shaft large enough to admit such ships."

"They came in at Copernicus," said Estelle.

"*Copernicus!* Impossible! That crater has a solid bottom."

"No it hasn't. Martian engineers have been working on it for two years, constructing a huge shaft, at an angle, so it isn't visible from above. Naturally no one ever visits that hellish hole."

"That's bad," said Brand. "Not even the Earth patrol will detect the Martians until they actually attack. Patrol ships don't cover the area between Earth and Luna."

"They'll win, Martin," said Estelle. "They'll *win!*"

There was a strange note in her voice, and her trembling, strangely, had stopped.

"Maybe not!" said Brand grimly. "Give me that flashlight. I'm going to try to pick up that patrol ship. I'm sure it's somewhere in the Black Hole, searching. I'll have to get him, or nobody. The radio in this cruiser won't penetrate the Lunar crust, and can't reach the Earth."

Estelle gave him the flashlight, and he turned it on. He turned to the radio, and seated himself. He snapped on the switches, waited while the tubes warmed up, then pressed the sending switch.

"How do you know the wavelength?" asked Estelle curiously.

Brand ignored her question for the moment. Instead he began calling tensely into the microphone.

"Robert Wales calling Patrol Ship N-twenty-seven. Calling Patrol Ship N-twenty-seven. Robert Wales calling Patrol Ship N-twenty-seven. Please come in, N-twenty-seven. Urgent. Please come in . . ."

"N-twenty-seven, answering Robert Wales," a voice suddenly crackled from the receiver. "Who the hell are you, and where are you?"

"Never mind who I am," said Brand. "Where are you?"

"Nice work, if you can get it," said the voice from the ether. "Hold on a minute, I'll call Captain Craig. He'll talk to you."

"There *is* an Earth Patrol ship in the Black Hole!" gasped Estelle.

"Sure . . ." Brand turned to her with a curious look. "What's so odd about that? It was sent in here to investigate, and it never came out, so it's still here."

"But who sent it?" asked Estelle. "Certainly you wouldn't—it would be suicide, if they did find the battleships.

Why, in one second they could be blasted to bits!"

"I know, and I didn't send it. Kathleen . . ."

"CAPTAIN CRAIG calling Robert Wales," came a familiar voice from the radio. "What is your message?"

"Listen, Captain," said Brand urgently. "Radio Earth and tell them to send a task force to blockade Copernicus crater, and to investigate escape shaft at its bottom. Martian battleships are planning to emerge from it to attack Earth. This attack may be soon . . ."

"I recognize your voice!" said Captain Craig in sharp interruption. "So you're using your real name now, eh? Before it was Martin Brand. I checked on that, again, you lousy traitor. Martin Brand is dead and buried, as official as hell. And you are an exile from Earth because of seditious acts. Come again, Wales. If you think any Earth task force will be lured into any Copernicus trap, you're mistaken. I'll call Earth all right. And the whole Patrol will be out after your hide."

"Captain," said Brand angrily, "you are a fool. Do you think it's logical that anybody could hope to gain from the destruction of any single Earth unit? I tell you, the danger is urgent. So long as you are in the Black Hole right now, you have the opportunity to check. If I show you a fleet of Martian battleships, will you believe me?"

"I've got eyes," said Captain Craig. "And from the sound of you, you're pretty close to us. What did you do to Miss Dennis?" There was a hard, cold, furious note in the patrol captain's voice.

"I left her in Luna City, where she took me to the hospital . . ."

"You skunk!" Captain Craig's voice blasted from the receiver. "So you're Edgar Barnes too! I picked that up on the radio just a few hours ago. Killed an Earth citizen, kidnapped a taxi-driver, marooned him in a crater, and left him to die. Only he didn't die. He got out, and came to the police with enough to hang you . . ."

"Listen you stupid ape," said Brand lowly. "I'll give myself up to you right now, if you want to come and get me. But when you pick me up, you'll also see those battleships. It's the only way I can carry out my work, which is to smash this thing. Commander Wilson had me covered, but an explosion and fire destroyed any evidence I had to prove my identity. You can believe what you wish—Martin Brand, Edgar Barnes, or Robert Wales. But if you'll point your ship wherever you are, in the direction of Luna city, and keep your eyes open, you'll see something very soon. And as soon as you see it, I'll be coming at you from that source, to come aboard. After that, the rest is up to you."

THERE was a moment's hesitation from the receiver, then the voice of the captain came again.

"Whoever you are," he said slowly, "you sure sound sincere. Okay, buddy. Show me something, and I'll radio Earth so fast it'll singe the hair off every Martian on Luna!"

"Attaboy, Captain," said Martin Brand thankfully. "And one more thing, whatever you do, don't come too close. You can't beat what's lying here, and I would like to get out alive, if possible. I've got a friend here, who . . ." Brand turned to smile triumphantly up at Estelle and broke off in mid-sentence. "She's gone!" he gasped.

The control room was empty.

"Who's gone?" asked Captain Craig's voice.

"Never mind," yelled Brand. "Watch in the direction of Luna City for fire-

works, right down in the Black Hole. I've got to stop that girl . . . she's gone after Jeffry Killian . . ."

He snapped off the key and whirled toward the doorway. He plunged down the corridor recklessly, stumbled over the corpse of the Martian guard, and reached the gangplank.

As he reached it, and stepped down to the dock, a brilliant searchlight beam winked on, and caught him full in its brilliance.

"Put up your hands!" came a shout. "Don't move another step!"

Brand halted, baffled and angry.

Several Martian soldiers came out of the darkness and gripped his arms. They marched him along toward the caverns he had once escaped from. Their faces were grim.

"You were a fool to come back," said one.

"Yes," said the other. "When Miss Carter gets hold of you, there'll be plenty of hell to pay, for you. Say, she certainly runs this show! An order from her is as good as one from the commander himself. I gotta hunch it'll be Mr. and Mrs. Jeffry Killian, governors of America, or something like that, when we smash the Earth in a couple of days. Smart, that dame . . ."

Brand's blood ran cold in his veins.

"What's that you say?" he faltered.

The Martian laughed hoarsely.

"Say, did you think you had a chance with that baby? She's ice. She runs the whole show now. I don't know how she does it. Maybe it's because she was crazy once. She sure isn't now! Why the other day . . ."

"Look out! screamed the other guard. *"Lu-bats!"*

The sweeping rush of wind that betokened the dive of one of the monsters of the Black Hole screamed down at them on the narrow ledge. One of the guards lifted his atomic rifle and began firing blindly.

"There're more than one!" screamed the guard again. "There're three, at least. We'll never get 'em in time . . . We're done . . ."

"Steam-guns!" shouted Brand. "Train your steam guns on the carcass, you fools. They can be blown up that way."

"That's right," shouted one of his former captors, now shrinking back against the cavern wall, trying to pull his steam-gun out of its holster. "You pulled the trick before, didn't you . . .?"

BRAND snatched the pistol from his grasp, trained it aloft, and pressed the trigger. The other guard was doing the same. The scream of wind from the diving lu-bats was a shriek in their ears now, as they came down to the attack. They had undoubtedly been attracted by the searchlight, whose beams still bathed the docks and the pathway.

Suddenly the lu-bat Brand had concentrated on blew up with a terrific roar and a blinding flash of flame that communicated itself to one of its two companions, and it too went off with a thunderous blast.

But the other lu-bat came on, seemingly oblivious of the holocaust of brilliance around it that now lit up the crater for ten miles around. Desperately Brand added the fire of his steam-gun to that of the other guard, and suddenly the combined beams took effect. A third flaming carcass came plunging down like a meteor, to flash past into the depths, only a few yards from them.

A hoarse scream of agony came from the guard with the steam-gun, and a large flaming fragment crashed down on him squarely. He screamed horribly once, then plunged off the ledge into the depths, a seared corpse.

Brand whirled, half-blinded by the light, and raced down the pathway toward the docks. An atomic rifle bullet exploded just behind him, sending a cloud of rock splinters into his back that struck with numbing force. Brand whirled, flicked up his steam-gun, caught the Martian soldier squarely in the chest. He went down, dead before he hit the rocky trail.

At the other end of the dock, a small cruiser darted out toward one of the battleships and Brand cursed.

"Who the hell . . ."

Then it dawned on him and he want white.

"Estelle!" he choked. "She's in that ship . . ."

He stumbled on down to the cruiser, and clambered into it. He shut the door, and made his way to the control room. Reaching it, he saw Estelle's ship reach the side of the monster warcraft, saw it slip into an air-lock that opened to receive her.

Brand snapped open the radio key, waited impatiently while the tubes warmed up, but as he waited, he slammed home the motor levers and drew the ship away from the dock. He cursed when the ship stopped with a jolt. He'd forgotten to cast off the mooring cable.

His finger pressed down savagely, and the cruiser leaped away. Half the dock tumbled into the abyss of the crater behind him, and he grinned. Perhaps that hadn't been a half-bad mistake, at that. Now pursuers couldn't reach the other cruisers to take off after him.

HE sent the cruiser hurtling at right angles away from the huge battleship. Now the lu-bat carcasses had disappeared into the depths, their brilliant flames extinguished. He lost himself in the blackness that had resulted.

Pressing the radio key, he called anxiously into it.

"Martin Brand, calling Captain Craig, Patrol Ship, N-twent . . ."

"I hear you!" came the excited voice from the receiver. "And boy, I see you too! We're only a dozen miles away, straight out. Get off the air, Brand, or Wales, or whoever you are, I'm radioing Earth headquarters."

"Go ahead!" yelled Brand. "And start running. If those battleships spot you, it'll be curtains. Full speed away! Quick!"

He snapped off the radio and sent the cruiser flashing along the crater wall. When he reached a spot where a sort of indentation offered concealment, he edged into it. Then he stopped the ship and waited. He listened intently to the radio, heard Craig's voice calling urgently into his transmitter.

"Patrol Ship N-twenty-seven, calling headquarters," he barked. "N-twenty-seven calling Earth . . . Come in, Earth headquarters . . ."

Suddenly a brilliant beam of light cut through the Black Hole as a searchlight on one of the battleships—the one Estelle had boarded—flashed on. A moment it flicked through the void like a giant sword, then suddenly it caught a tiny note, lost it once, then held it fast.

"Damn!" said Brand, clenching his fists. "They've spotted the N-twenty-seven!"

A flash came from the battleship, and Brand could follow the course of it along the searchlight beam, saw it end at the tiny fleeing mote. There was a brilliant burst of flame, and the voice of Captain Craig in the receiver cut off abruptly.

And as its echoes died, Brand realized the truth—the message had not gotten through. Earth had not yet replied to its patrol ship's call!

CHAPTER XI

One Man Alone!

MARTIN BRAND sat in stunned silence for several long moments. Now, at last, just on the verge of the success of his mission, failure had blanked him out as completely as he had ever been. The luck of "Suicide" Martin Brand had come to an end.

The Earth was entirely unaware of the danger that threatened it. Estelle had tricked him. She had played up to him, fooled him with caresses. He thought almost subconsciously with a strange agony of the red hair and the blue eyes of Kathleen Dennis, and a strange pang struck into his breast. But he tore his memory away from her savagely. A great anger was beginning to grow inside him, and it expressed itself in words now; words that echoed through the silence of the control room like the bitter notes of a flat-toned bell.

"She wasn't sane! No sane person could have acted that superbly. Her mind might have regained its functions, but all the good in her, if there ever was any, had been killed. She was . . ."

He found no word to describe her.

Suddenly the radio receiver crackled and a voice came over it.

"Estelle Carter, calling Martin Brand," came the soft tones, but soft only in the sense that they were not loudly spoken.

In a sort of stupefied surprise, Brand clicked open the switch and answered.

"Martin Brand, answering," he said dully.

"I, too, remembered the wavelength," her soft voice came to him mockingly. "And I am sitting in the control room, speaking over the private radio of the Commander of the Martian Invasion Fleet Enroute to Earth. In a few hours, I will take off, to blast the Lunar entrance, and take control of the inner world. The rest of the fleet will proceed, under my orders, to Earth, through Copernicus, to destroy the defenses. Earth will have to surrender in a matter of hours.

"Then, because it was I who did it, I will be able to dictate my own terms. I shall rule the Earth, as the representative of the Martian government. I shall be truly an empress of the world, as there never has been before."

"You're mad!" said Brand.

"No," she said in the same level tones. "Mad once, but not now. Today I am the sanest person alive. I am, I realize it now, the ultimate example of sanity. All people have some insanity in their make-up. I have none. Everything but absolute logic has been erased from my brain. I am not hindered by emotion, although I understand fully what it is, and can simulate it if necessary. You should know that.

"If you had been as I am, you would not have been tricked by your emotions. You would have seen through my empty kisses, because, in the light of cold reason, they had no foundation, no excuse for existence. But you let your body rule your reason. You responded, and forgot to think . . ."

"You are a devil!" croaked Brand.

"I am a sane, logical, steady-minded human being, perhaps, the only one who has ever lived."

"What . . . how did you do what you have done?" he asked.

"REMEMBER the Martian you found dead in the ship in which you now sit?"

"Yes."

"I told him that he could rule Earth with me. So he killed Jeffry Killian for me, while I watched. It was very interesting to see him die, knowing that he was paying for what he did to me ten

years ago. Perhaps that is the only emotion that I still retain to a slight degree, the ability to hate. But when it is satisfied by revenge, it is a very pleasurable emotion."

Brand listened with horror to this cold recital, but it was not finished. She went on:

"I had persuaded Jeffry Killian to commission me as his first lieutenant, and now, with him dead, I was able to take command without question. So, under the ruse of going out to the flagship to take over command, I led my Martian friend to the cruiser, and told him the truth. Then I shot him in the face. He was a very surprised Martian.

"I told the truth when I said I was calling Commander Wilson. I wanted to know where you were. You have proved a pastime for me more than once. And I would have been very interested in making you become a traitor for love of me. But this way it is better. I don't intend to bother you again. You are in a situation that is perfect. Even I could not have figured out a better predicament. It will be interesting to watch what happens to you."

But Martin Brand was no longer listening to the mocking voice with the look of a stunned creature on his face. It had become cold, calm; and lurking in the depths of his eyes was a calculating look.

He sent the cruiser out into the Black Hole, all lights doused, and drove it back toward the giant battleship.

The voice of Estelle Carter went on.

"Are you listening, Martin Brand?"

"Yes," he said grimly.

"Good. I am curious to know who Kathleen is? Could it be that the heart-broken, bitter, savage soldier of space found a new love after all? If you did, then it must have been a weak love indeed, to wilt the moment I threw myself into your arms!"

Brand did not answer. Instead he was intent on a giant black bulk looming up ahead of him. He dipped the cruiser down, proceeding very slowly and silently and darkly. The ship drifted along like the ghost of a ghost, under Brand's skillful guidance.

"I see you do not answer me," mocked Estelle. "You are afraid that I will find her and do something to her. That is silly. If she really loves you, and you her, I would not think of destroying the beauty of that love, and the tribulation and trial it will have to endure because of the intolerable situation that exists for you.

"Certainly you can never make her happy. You can never marry her. You can only face the reality of being nobody at all. You haven't even a name you can call your own. As Martin Brand you are dead. As Robert Wales you are a traitor and a seditionist, with no rights of citizenship on any world, therefore no right to marry. As Edgar Barnes you are a murderer, and as such, will be executed if caught, according to Lunar law."

The mocking voice went on. Brand's face grew grimmer as he listened, and as he maneuvered the cruiser beneath the tremendous belly. Finally he had the ship hanging motionless. Then he spoke.

"Listen, Estelle," he said quietly. "I've been letting you talk on, listening to you gloat over me. It's been very interesting to me. I can, of course, only judge you on an emotional basis, since I am not 'sane' as you are. To me, your present condition is something to pity, and if I feel anything at all about you now, it is a large measure of sympathy.

"I am sure you are not responsible for your actions, and although for a moment I felt that I hated you, that

passed. Now I only pity you. And I pity you the more because I must destroy you. I must destroy you because your warped mind is the most dangerous thing that has ever faced Earth's peace and happiness, and threatened it with permanent destruction.

"Mars may conquer Earth, but wars come and go, and freedom is won again. But if you were to come into power, with your mad mentality, then indeed would a sad thing happen to the world I love.

"That is why I am going to destroy you now!"

FOR a moment there was silence, then Estelle's voice came to him coldly, with short-clipped words dripping one over the other from her lips like venom from the fangs of a snake.

"It is you who are mad now, Martin Brand! You speak wildly of destroying. You can destroy nothing! You sit there in a tiny ten-man cruiser, hiding like a rat in some hole in the wall. You have at your disposal one small cannon, which fires an atomic shell capable only of smashing a small destroyer. What can you do to me here in the mightiest battleship in all the solar system? You . . ."

Martin Brand interrupted.

"That atomic cannon you speak of is pointing at the moment straight into the bomb racks of your mighty ship. It will send that atomic shell you speak of straight into the magazine of your battleship. And when it explodes . . ."

"You lie!" shrieked Estelle Carter. "You lie! You are nowhere near."

"Before you die," said Brand, "there is one thing you can think of. What is that emotion in your voice now? I'd call it fear. Fear is a terrible thing, Estelle. And because I pity you, I don't intend to let you suffer any longer. My finger is on the trigger . . ."

Martin Brand pressed the trigger, and with the other hand sent the tiny ten-man cruiser peeling off in a tremendous swooping dive straight out and down into the Black Hole's depths. Behind him a great mushrooming flame grew and grew until it seemed that it would catch up to him and destroy him too. But it tossed him on, like a feather before a gale, and his senses reeled with the awful sensation of a dive almost more than human tissue can stand.

Even through the reeling of his mind, he heard the thunder of the holocaust he had set off behind him. All was flame and light and smoke and bursting sound in the Black Hole. And added to it was a new thunder that was not that of rending metal, but of shattering rock.

He brought the buffeted cruiser to a steadier pace, and looked back when his sight had cleared enough to see what had happened there behind him.

Like a slow-motion movie, the whole wall of the crater was toppling over, engulfing all the cataclysmic holocaust of shattered ships as though it had been but a match-flame in the darkness. And long minutes later the whole mass came to rest on the side of the crater and once more darkness fell over the scene.

The Martian armada was no more.

And then Martin Brand, desperate dare-devil of space, bowed his head in his hand and cried.

THE lights of Luna City were bright before him, several hours later, as he brought the cruiser slowly forward. In his mind were crowding the memories of the past hours, and he gave no thought to his own situation. Nor did he do more than glance idly at the small ship that bore down on him now from above and behind. It was only when his radio crackled, and a voice came

through the receiver, that he stirred, and the grim immobility of his features changed.

"Lunar patrol ship A-forty calling cruiser below us—land at Luna City spaceport and no tricks. We'll blast you if you make a move!"

Brand drove the ship slowly toward the spaceport and brought it down. The patrol ship landed behind him, and he stepped out to meet the two figures who climbed from it. But in midstride, he stopped. One of them was familiar. Clad in the trim uniform of an Earth Patrol agent, red hair gleaming under smart military cap, and blue eyes expressionless in a white face, was Kathleen Dennis.

The officer spoke.

"Robert Wales, alias Edgar Barnes, I arrest you for murder, for attempted sabotage, and for conspiring to destroy the peace of Luna and Earth."

Martin Brand scarcely heard the charges. He was staring at Kathleen Dennis, at the hurt in her eyes, at the disgust on her face, and at the stiff unyielding posture of her trimly uniformed figure.

"Why are you looking at me like that?" he said.

"You traitor!" she said in a low voice.

Brand reeled in shock, then stepped forward.

"What do you mean?" he asked.

"Captain Craig radioed the whole story to Luna Headquarters just before his radio blanked out. Just before you shot him down with that Martian cruiser you smuggled into the Black Hole!"

"He was shot down by the Martians!" Brand burst out. "I blew up the magazine of the flagship, and the whole fleet was buried beneath a slide in the Black Hole . . ."

"That'll be enough!" interrupted the Lunar officer. "Come along, Robert Wales. You are under arrest. And I promise you, this time you won't just be exiled. It's execution for you!"

"But I tell you it's true. That's what Captain Craig was trying to radio to Earth headquarters—that he had seen those battleships in the Black Hole. They were ready to attack. Estelle Carter, completely mad, was in command . . ."

Kathleen's eyes opened wide.

"I see it all now," she said. "I heard of her being released as cured . . . She turned to the Lunar officer.

"This man was exiled from Earth for sedition. He has attempted the same thing here. He has claimed to be Martin Brand, whom you know is dead. It was Martin Brand's old sweetheart he just mentioned. Somewhere he got hold of that, and tried to use it to his own advantage. He is a traitor. And I leave him in your hands."

"We'll take care of him," promised the Lunarian grimly. "He won't be exiled again!"

Kathleen turned to Martin Brand. In her eyes he saw a light that he understood—because it was the same reckless light he himself had had in his own eyes ten years ago.

"I have a job to do," she said. "And I intend to *do* it!" Then she turned and stalked swiftly away. And Martin Brand found his wrists encircled by a pair of handcuffs.

He stared down at them and a whisper escaped his lips.

"The luck of 'Suicide' Martin Brand!" he murmured. "It's run out at last."

But as he walked ahead of the grim-faced Lunarian, he was smiling.

"It's all right, Kathleen. You'll get over it. But maybe someday you'll know that I had a job to do too, and I *did* it!"

JUPITER—The Giant World

by WILLY LEY

A scientist looks across the void and gives us a vivid picture of the surface of Jupiter

No. 6

ASTRONOMY is one of those sciences where not only new facts are added steadily but where also old and presumably established facts are revised in intermittent purges with consequent and subsequent mass liquidations of heretofore healthy and useful theories.

Jupiter, largest planet of our solar system, is a case in point.

I grew up in the company of popular books on astronomy by Camille Flammarion, Dr. M. W. Meyer and Littrow. I know now that these books were slightly antiquated even at that time, but I did not know then. Thus I was convinced by and with those authors that Jupiter was really something like a second sun of our solar system.

Sol, those authors said, is almost a binary—not quite, since Jupiter is still just a little bit too small, but almost. If that gigantic planet were still a bit larger than it really is, they said, it would be a veritable second sun and its greater gravitational influence would cause outlandish deviations in the orbits of the other planets.

Not only that it would be strangely thrilling to live on a planet in a binary system—it wouldn't be, of course, since we wouldn't know it any other way—the resulting complicated orbits of Earth and of the other planets would be extremely helpful for a quicker development of higher mathematics. And our seasons would show remarkable superimposed periods of a second order in such a case, depending on the relative positions of Jupiter and Earth.

Unfortunately, it was said, Jupiter although immensely large, was still a little bit too small for all these interesting complications. If did not radiate light anymore—at least not in appreciable quantities—having cooled but recently. Its four large moons, however, would have to be considered tropical worlds. To them Jupiter still represents a second sun, supplying about as much light and considerable more heat than the other, larger, but more distant sun.

It was an interesting thought to have such a smaller solar system right within our own system, for intimate study and interesting speculation. Jupiter's four large moons, famous already because Galileo Galilei had discovered them and Olaus Roemer had used them to measure the velocity of light, acquired even more interest. They were not

Jupiter's tremendous gravity would prevent the existence of anything higher and more abruptly rising than the lowest of hills. While the soil might well be fertile plants will be forced to remain small or to form very strong trunks. Even then they would not grow higher than say fifteen feet because they would be uprooted by the storms sweeping over the planet.

just moons but little model planets, parts of the system of a dying small sun which in turn was part of the system of a larger sun which in turn . . . who could tell.

When "No. V" was discovered the analogy seemed even closer. Here was a small moon, rushing around its planet at a tremendous speed and very closely, just like Mercury in the larger system.

Then the Red Spot appeared, around the year 1878. An immense area, larger by far than the surface of the Earth, glowing in a vivid red. What did that mean? Was Jupiter trying to revert to its (supposed) ancient status as a small secondary sun? Or did astronomers witness the incredible spectacle of the birth of another world, another moon?

Astronomical opinion was about equally divided, a little later, when observations showed that the period of rotation of the Red Spot was not exactly the same as that of the planet itself, the tendency to agree on the latter hypothesis became stronger. But instead of separating itself from the planet and becoming another moon the Red Spot lost color and began to fade away, although it is still visible. Then it was found that the Red Spot had not been non-existent prior to 1878, it had only been less marked in color.

AND then astronomy was subjected to a number of purges on mathematical grounds. First it was shown that the Red Spot could never have developed into a moon, because moons

could not be formed that way, especially not a moon of Jupiter. The centrifugal force at Jupiter's equator plus whatever explosive forces you like to invent could never throw anything beyond the grasp of Jupiter's attraction.

Then it was doubted whether the Red Spot was lava or molten rock at all. Then various experts set out to prove that Jupiter itself must be incredibly cold, colder than anything existing on Earth, with the exception of the interior of those machines that liquefy oxygen, nitrogen and even hydrogen and helium.

Now if Jupiter itself was cold enough for carbon dioxide snow and occasional dew of liquid air the moons had, of course, to be frozen solid. Even those bacteria that, as is known from experiments, endure the cold of liquid hydrogen and that are said to drift in space driven by the pressure of the sun's rays would feel uncomfortable on those moons and wish that they had landed in a nice mild climate instead, say at the North Pole of Mars.

After such a cold plunge one feels the overwhelming desire to stick to those facts for a little while that cannot possibly be disputed. They are, as usual, the facts you find tabulated in encyclopedias and reference books.

Average distance from the sun, they read, is 483.3 million miles, the length of Jupiter's year is 11.86 Earth years, but the length of the day only 9 hours and 55 minutes. The diameter of the planet is quoted at either 81 or 87 thousand miles, depending on whether you measure from pole to pole or from one point of the equator to the opposite point. The volume of the planet is impressive, 1312 times that of Earth, the mass (weight) is 317 times that of Earth and both factors together result in an average density of about one quarter of that of Earth or 1.3 times that of water. The acceleration at the surface is 87 feet per second per second (as compared with not quite 32 feet per second per second on Earth) so that a weight of a ton, placed on a spring balance, would show 2.584 tons.

Add to these figures the facts that the disc of Jupiter is perceptibly flattened, that the stripes formed across the disc by what we'll agree to call clouds are very marked and that the January 1940 census speaks about eleven moons and you know the indisputable facts.

The surface temperature, calculated by Christiansen and von Pirquet, should be minus 146 degrees centigrade. Now the basis of that calculation is an idealized planet of mass, size and distance of the actual planet, but assumed to be a perfect sphere with a homogenous surface which is a perfect heat conductor. Such idealized p l a n e t agrees closely with an actual planet if it has no atmosphere.

An atmosphere may change the temperature very much—Earth is almost ten degrees centigrade warmer than that calculation permits—and if there is any internal heat left the picture might change still more. On Earth it's only the atmosphere that accounts for the difference, its internal heat has no measurable influence except in the immediate vicinity of hot springs and volcanoes.

On Earth the atmosphere consists of nitrogen and oxygen with one per cent of argon and traces of helium and the other rare gases, plus some carbon dioxide and water vapor.

On Jupiter the atmosphere must be much different, at least above the clouds, the region of which we know that the calculated low temperatures actually exist. Water vapor and carbon dioxide are frozen out of such an atmosphere that is made up mainly of

helium and hydrogen. Traces of methane or marsh gas (carbon tetrahydride, if you prefer) have been discovered by means of the spectroscope, there must be much more of that gas farther down. On the strength of the close agreement between calculation and measurements a weird Jovian landscape was designed for the use of astronomers by chemists.

THE older school had spoken about continents consisting of superficially cooled lava, not yet really solid all around the planet. Where it was solid the first steaming oceans of almost boiling water formed which accounted for those solid clouds through which no astronomer anywhere in the system could ever have looked at the real surface. If this was positive hell the new school decreed negative hell.

There were continents, consisting of ice that was frozen so solid and for so long that it hardly knew how to melt, supposing even that heat came. The atmosphere made up mainly of the two lightest gases, helium and hydrogen, that are not so very light under such conditions. There was poisonous methane in the air, but also frozen on the ground. Oxygen and nitrogen did not exist in their free state, there had been so much hydrogen that all oxygen had been used up to make water or ice and all nitrogen had been forced to form ammonia.

The pressure was certainly sufficient for this chemical reaction, thus there existed very blue ammonia oceans and ammonia rains. Jupiter had been transformed into a truly terrible world with all the coldest substances dominating, an atmosphere that was composed of unbreathable and/or poisonous gases and meteorological conditions that caused incessant normal winds of about twice the velocity of what humans call a severe storm. And all that under tremendous atmospheric pressure and with a gravity 2½ times that of Earth.

That picture was overwhelming in its cold chemical logic, so overwhelming that it was accepted with hardly any question.

But it might be due for a purge just the same. In Fall, 1938, Earl C. Slipher of the Lowell Observatory, Flagstaff, Arizona, declared openly that he does not believe in this picture any more. His reasons are simple. What knowledge we possess of Jupiter, cold gases with methane and ammonia present, comes from above its clouds. It is undoubtedly true—for the region above the clouds. But does that permit us to draw conclusions as to conditions on the true surface? We know definitely that a picture of Earth, based on very careful and correct measurements of conditions in the region between 20 and 200 miles altitude would be very far off. How about Jupiter?

Slipher dissented because of his observations of many dark clouds. The equatorial belts had been nearly white in 1937; in 1938 they showed spots of dark colors, some blue, some red and some plain black. Slipher could not offer an explanation for these tremendous disturbances, but he could, and did, say that something on the planet, deeper down than those clouds, must produce them. Heat is movement of molecules; important and large scale changes, if not produced by differences in temperature must at least produce differences in temperature.

"The great observed activity indicates some great activity inside and this points strongly to high temperatures below the clouds," he is reported to have said. All of which means that we have to change our conception of Jupiter once more.

Or do we have to? Visitors to South

America may describe it as a country consisting of high snowy mountains in a cold thin air. Or they may say that it is a country consisting of endless tropical jungle of the steamiest and hottest kind. Both descriptions would be right. Something like this might be true for Jupiter too. We do know that the "new" (cold) conception holds true for the region above the clouds. The old (hot) conception might be true for the surface of the planet just the same. If only some of the exaggerations (called "conclusions") are left out, both pictures may be valid side by side or rather one on top of the other. And, after all, there exists no other explanation for the Red Spot than that of a volcanic glow. And the changes of that Red Spot also indicate activity.

There is no certainty—but it is probable that the controversy about Jupiter ends like many other scientific controversies: with the realization that both sides were right.

The End

« BUSY BEES—AND NO WONDER! »

WOULD you make a 40,000 mile trip for a one-pound jar of honey? Neither would we, but that is the total distance traveled by many bees to provide the nectar necessary for just that amount of honey.

A honey bee weighs approximately only 1/5000th of a pound, and during the honey flow on each trip she carries approximately half her own weight of nectar. It therefore requires about 10,000 flights to gather a pound of nectar. Furthermore, nectar loses about half its weight through evaporation.

Taking all this into consideration, as well as the fact that each return flight averages about two miles, it is figured that bees have traveled at least 40,000 miles to provide 16 ounces of honey.

No wonder the busy honey bee unfortunate enough to be born in summer lives but a brief six weeks. Bees born after the summer rush have an average life span of seven months.

GLASSES THAT BARED THE SOUL —REVEALING ALL FOUR FACES!

SEPTEMBER ISSUE

fantastic ADVENTURES

These were the gift of the doomed Englishman fettered to the strange, red-headed young man. "Have some fun with these," the Englishman had said. . . . And Red saw not one face but FOUR belonging to everyone he observed. Thoughts were laid bare to him by the tell-tale faces. Secret souls were unmasked. Little did he realize that the cause of the Allies in Pacific Islands would hinge on his ability to use these glasses. . . . Danger and excitement, fantasy and truth, blend perfectly to make a story you'll never forget. Don't miss this thrill-packed tale by Don Wilcox . . . one of the many great stories you'll want to read in the mammoth September FANTASTIC ADVENTURES.

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Why Are You What You Are?

by B. B. GIBSON

We've all wondered at times just what makes us tick. Here's an article that puts forth a few facts about the science in our physical make-up

ONE of the age-old questions that is still baffling science is whether heredity or environment is more important in determining what a new born babe will grow up to be—a genius, a moron, or a Mr. Average American. To present both sides of this question—or even one side with all its ramifications—would require the space of this entire magazine. And so, without trying to convince you one way or the other, I will present a short argument for heredity. Perhaps one of you other readers would like to send in your "convincer" for environment.

First, let me quote Herbert Spencer, who was one of the greatest biologists of all time, in defining heredity as "the capacity of every plant and animal to reproduce other individuals of a like kind." Through successive generations there persists a constancy of likeness or stability of type. In many cases, the offspring exhibits not only parental, but ancestral characteristics, which are called atavisms or reversions.

Pathological or abnormal conditions of parents often reappear in the offspring, though this reappearance is not always due to transmission. Innate, constitutional, congenital, or germinal qualities, and the results of these in the parents, are transmissible to the offspring.

In regard to the relation between parents and offspring, there are several problems. One is the peculiarity of the germ cells which enables them—after uniting as male and female elements—to develop into organisms essentially like the parents. There are also minor questions in regard to atavism, repetition of injuries, the inheritance of disease, and those problems of social inheritance which concern the relation between the human species through successive generations.

Many naturalists have attempted to explain the uniqueness of the germ cell by regarding it as concentrations of units collected from various structures of the body. The hypothetical process by which these units are given off from the various organs, travel to the seat of the germ cell, and are there accumulated to reproduce in the embryo, structures like those from which they originated, is called pangenesis. The first theory was that of Spencer, who suggested the existence of physiological units, derived from and capable of development into cells and accumulations in the reproductive elements. One of the best known forms of the theory is Darwin's provisional hypothesis of pangenesis, according to which every cell of the body, not too highly differentiated throws off characteristic gemmules, which multiply by fission, retaining their peculiarities, and become concentrated in the reproductive elements, where in development they grow

into cells like those from which they were originally given off.

In passing, I might also mention Lamarck who developed the theory that the offspring inherits the characteristics acquired by the parents. Since this theory has been unquestionably disproved no further mention need be made. Galton, in 1872, was led by his experiments to the conclusion that "The doctrine of pangenesis is incorrect." However, he allowed a limited pangenesis. He admitted that a cell "may throw off a few germs that find their way into the circulation, and have thereby a chance of occasionally finding their way to the sexual elements, and of becoming matured among them."

IN 1849, Owen pointed out that in the developing germ it was possible to distinguish between those cells which were changed to form the "body," and those which remained unchanged and formed the reproductive organs. Jager expressed his views as follows: "Through a great series of generations the germinal protoplasm retains its specific properties, dividing in development into a portion out of which the individual is built up, and a portion which is reserved to form the reproductive material of the mature offspring." This reservation by which the germinal protoplasm is sheltered from external or corporeal influences, and retains its specific and embryonic characters unchanged from the parent ovum, Jager called, "the continuity of the germ-protoplasm."

Weismann claimed that:

1. A small portion of the effective substance of the fertilized egg cell remains unchanged during the development, and serves as a foundation from which the germ cells of the new organism are produced.

2. This germ plasma is part of the nucleus, which possesses a complex, minute structure, but has great stability, for it absorbs nourishment and grows enormously without the least change in its constitution.

3. While part of this special nuclear substance is reserved unchanged for the formation of the germ cells of the resulting organism, part of it is changed into the nuclei of the body cells, where it sometimes retains enough of its original efficiency to be able to repair injuries or start the development of a new organism in a sexual reproduction.

H. de Vries sought to combine the fact of continuity with part of the theory of pangenesis. He maintained that every characteristic of the organism is represented by a special pangene, and that the germ cells contain samples of all. He stated that this pangenetic accumulation in the germ cells was the result of a definite, direct continuity between the germ cells and the fertilized ovum which started the organism to which they belong. In the continuity between the reproductive products lies the solution of the main problem of heredity. The germ cells which give rise to offspring are unique in their continuity with those which give rise to the parents. In the simplest animals of Protozoa, the first organism buds or splits and passes on a fraction of its living matter to the second which grows up into a similar adult Protozoa. With higher animals the same holds true, though the continuity is less direct.

GREGOR JOHANN MENDEL was an Austrian priest and biologist whose main scientific interest was botany. He published the results of his researches in 1865, eight years after he began his tests, but his work received no attention until 1900. Mendel centered his attention on the inheritance of

contrasting characteristics when different kinds of peas were crossed. He selected peas that grew on tall vines and those that grew on short ones; some whose seeds were wrinkled and others with smooth seeds. He used peas of contrasting colors and tried those with hard pods and also soft pods. By tracing these contrasting characteristics through a series of generations, he was able to formulate his law which is the foundation of the theory of heredity.

He pointed out that the individual itself is not the unit of heredity, but that each individual is a complex of many unit-characters which may be separated from one another and variously recombined. Mendel thought that each character had a special determiner in the germ cell, but modern research shows that two or more determiners (genes) produce one characteristic by interacting.

It is significant that the results of Mendel's experiments have been duplicated over and over again, and Mendelian inheritance is held to be a general fact in the plant and animal worlds, though, of course, there are many elements in heredity that do not conform to a mathematical rule.

In respect to man's inheritance, we know that eye color, night-blindness, and jointless fingers are Mendelian dominants, and that albinism, left-handedness, and deaf-mutism are recessives. For example, if an albino mates with a normal person, all the offspring will be normal. If the son of such parents should mate with the daughter of similar parents, three normal and one albino could be born to them. Two deaf-mutes, whose defects were inherited and not acquired, would have deaf-mute children, since recessive characteristics breed true. By Mendelian principles, scientists can explain the cropping out of an abnormal condition in a child of normal parents. Characteristics latent through several generations may appear again when a particular combination of genes is effected.

A very good example of heredity is the case of an unmistakably white family in Norway which has had for generations a considerable proportion of members with hair as kinky as a Negro's. Moreover —believe it or not— this hair bobs itself; for each hair breaks off after reaching a length of two or three inches. Mr. Otto L. Mohr of the Anatomical Institute of Oslo University, who writes of this family in "The Journal of Heredity," believes that the peculiarity arose spontaneously over a century ago.

A problem which modern biologists are trying to solve by experiment is heredity vs. education. So far heredity seems to be ahead. In other words, if you are smart, it is because you were born so, of smart ancesters, rather than because of your education.

This idea of whether heredity or environment was most important in the offspring has led to many arguments and it is far from settled at this time.

"Give me two calcium tablets and a cup of lactobacillus acidophilus."

DISCUSSIONS

AMAZING STORIES will publish in each issue a selection of letters from readers. Everybody is welcome to contribute. Bouquets and brickbats will have an equal chance. Inter-reader correspondence and controversy will be encouraged through this department. Get in with the gang and have your say.

YOU'RE WELCOME!

Sirs:

I should like to extend my most earnest thanks to you for publishing my letter in the latest issues of your magazines, *Fantastic Adventures* and AMAZING STORIES. I have sold all the books offered already, and have made some very interesting pen-pals. Only in science-fiction and fantasy publications would this service be offered to their readers. Free-of-charge, that is. Thanking you again, and congratulating you on your excellent magazines, I remain

BILL BLACKBEARD,
216 Orchid Ave.,
Corona del Mar, Cal.

Our Discussions and Correspondence Corner certainly have proved to be favorites with you readers. And you'll always be welcome.—Ed.

SATISFIED

Sirs:

I have just finished reading the June issue of AMAZING STORIES and I feel called upon to render my decision or opinion on the issue.

To a soldier who has to work 12 solid hours every night of the week it really is good to find a magazine as interesting as yours is. I know, it does make one's imagination expand a bit in order to grasp what they are reading, but the outcome on the whole is a very interesting journal.

Personally, I believe that Nelson S. Bond has hit a perfect stride in his story, "Gods of the Jungle." I move that his story be accepted as the best one in your June issue and that he be presented with a bouquet of his favorite praises.

Harl Vincent writes a good short story and W. P. McGivern and P. F. Costello should be placed in the same category with them. I enjoyed their stories very much. In my opinion the stories rate as follows:

1. Gods of the Jungle—N. S. Bond.
2. Voice from the Void—H. Vincent.
3. They Forgot to "R.P.H."—P. F. Costello.
4. The Avengers—W. P. McGivern.
5. Scientist Disowned—R. Z. Gallun.

The rest of your stories are mostly fair reading, that is all but a couple. "Henry Horn's Blitz Bomb" was at best—"corny." As for "Juggernaut Jones, Trucker," reading it was a waste of time. Last but not least, "Captain Stinky." For my opinion of that story just drop the formality of Captain and the remaining word is my opinion of it.

Just publish more stories by Bond, Burroughs and Vincent and you can rest assured that I'll remain,

Satisfied,
PVT. PASQUALE CATINO,
1326 Service Unit,
Medical Detachment,
Station Hospital,
Camp Lee, Va.

Thanks for a fine letter, soldier! And we hope we can keep you satisfied.—Ed.

"Er—it's an old custom among Martians to present guests with a going-away gift, Dear."

WE DID

Sirs:

Just finished reading the June issue of AMAZING. Must say I thoroughly enjoyed it as I have about every issue since the mag. came into print. The giant issues are great. Keep up the good work.

I am inclosing a letter to Author Raymond Z.

(Continued on page 231)

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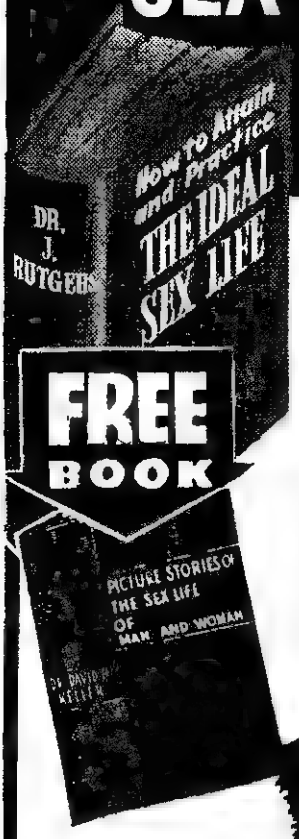

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(Continued from page 228)

Gallun, which I would appreciate very much if you would address and post to him, if it is possible for you to do so.

GENE RISHER,
115 Bond St.,
Johnstown, Pa.

Your letter to Gallun has been forwarded. We expect that you've received an answer by now. —Ed.

ITEMIZED OPINION

Sirs·

After reading the June, 1942, issue of good old AMAZING I just couldn't resist the impulse to write and tell you how good I think it is. For you really rang the bell this time.

Now I'm not one of those guys that keeps yelling for trimmed edges or slick paper. . . . Naw, I think you're great as is. For a long time AMAZING and FA have been No. 1 and No. 2 on my hit parade of mags.

As is usual for most letters to the editors of magazines I will try to pass judgment on stories that do not need it . . . if they're printed in AMAZING or FA, that's a proof of their quality. Anyway, I'll just go down the contents list giving my insignificant opinion on any and all stories thereof:

THE AVENGERS: McGivern has written a swell story of the future there. Somehow it's different.

THEY FORGOT TO "REMEMBER PEARL HARBOR": Costello isn't so bad but I think the story could have been condensed some to give room for a better short.

TIME WILL TELL: Get more of this guy, Emil Petaja. He sure writes a swell time-travel story. That's my favorite kind of Scientifiction.

SCIENTIST DISOWNED: Gallun's got a new idea there but it could have been dressed up a bit.

HENRY HORN'S BLITZ BOMB: Now there's something I like . . . humor mixed into the short S-F stories. I don't know much about Mr. Dwight V. Swain, but I'm willing to read all he writes about Henry Horn.

JUGGERNAUT JONES, TRUCKER: Ah, McKenzie again with our own super-duper salesman in another wow of a short.

IT HAPPENED IN SPACE: I read the story but I have seen better by Wellman. I don't go much for interplanetary stuff, anyway.

SERGEANT SHANE GOES TO WAR: Mr. Cabot, this is getting tiresome. Can't Shane ever do anything right on the first trial?

CAPTAIN STINKY: I think I remember seeing Gerald Vance's name somewhere before. This short isn't bad considering the time-worn plot.

THE MAN WHO WAS TWO MEN: Jarvis is a new man, eh? Well, all I can say is that I can see no difference in his writing and that of a professional. An excellent story, let's have more.

GODS OF THE JUNGLE: Sorry, no verdict. I never start a serial until I have all the install-

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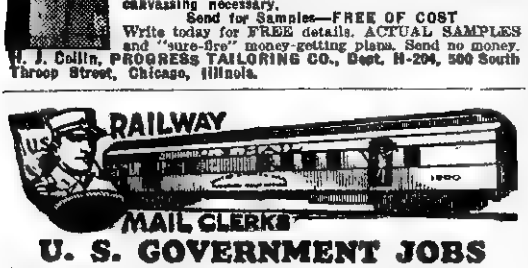

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ments. However, anything by Bond promises to be good.

VOICE OF THE VOID: It sure is nice to see a story by Harl Vincent between your gaudy covers. AMAZING is lucky. I didn't have any idea how the story was going to end. It could have been played up into an emotional drama.

Well, there's my humble opinion of your latest issue.

I think, Mr. Editor, that you will be interested to know that when I buy either AMAZING or FA the first thing I read is your editorials, that is, after I chuckle at any and all cartoons. Your column sort of gives me an idea of what to expect in the pages following.

BRICE PAULSELL,
2807 Bruxelles St.,
New Orleans, La.

Thanks for this very conclusive comment. Everything you've said has been noted and our personal thanks for the comment on our column. —Ed.

MALCOLM SMITH

Sirs:

Your June cover was a dandy, but try as I might I couldn't find (or figure) out who painted it. There's no signature and no notice on the inside. Of course, no picture is perfect, but I'd like to know why those other tanks were in the background, when the only tank in the story was driven by Morma-Ri. There are 13 (count 'em) more tanks on the cover than should be.

The back cover was swell. Oh, those beautiful space ships! Speaking of space ships, how's about another interplanetary issue? (Illustrated mostly by Fuqua.)

The best interior illustration was Hadley's for "It Happened in Space." Boy, Hadley is improving with every issue.

Stories rate:

1. THE AVENGER'S. Ah-ha! McGivern finally does something successfully that *wasn't* humor! 'Ray! 2. GODS OF THE JUNGLE. Nelson S. Bond scores again!! I can't wait for the second part. Say, was that blurb about the "Book of the Damned" real, or just Bond's imagination? I'd like to get hold of that book, if, of course, it was ever written. 3. THEY FORGOT TO REMEMBER PEARL HARBOR. Good. Costello is improving rapidly. 4. TIME WILL TELL. Yipe! What a story! 5. SERGEANT SHANE GOES TO WAR and HENRY HORN'S BLITZ BOMB. Both rate fifth place. 6. SCIENTIST DISOWNED. Exiled scientist story, but with a different twist. 7. IT HAPPENED IN SPACE and CAPTAIN STINKY. The former was too short, but good. Captain Stinky should be a serial. 8. THE MAN WHO WAS TWO MEN. Pretty good. No more, no less. 9. VOICE FROM THE VOID. A little too sloppy to suit me. 10. JUGGERNAUT JONES, TRUCKER. This series is awful. Terrible! Corny! It stinks! nufsed.

Another swell issue, and it looks as if these

large sizes are going to keep on coming out. I hope so.

In the future, I want the following: More serials (3 and 4 parts), more illustrations by Magarin and Finlay, *In that order!* More humorous shorts and novelets by David Wright O'Brien.

GENE HUNTER,
616 E. McCarty Ave.,
Jefferson City, Mo.

The June cover was painted by Malcolm Smith, who is now on our staff, replacing Julian S. Krupa, who joined the Marines.—Ed.

ALL IN ALL

Sirs:

Having just finished your May issue of A.S., I went back over it, and the stories rate (according to me), as follows: Lord of the Crystal Bow, ranks highest for action, as for description—ugh; Arctic God ranks second (all right so don't agree with me); Martin Miniature, third; The Case of the Mesozoic Monsters, fourth; Sutton's Strange Voyage, fifth; The Return of Lancelot Biggs; and (you'll just love this) The Crystal Planetoids, seventh. Most of the others are fair, but as to Caveman Meets Blonde, fah!

The one thing I positively agree with you about is your cover, it's super.

J. Jackson's job of illustrating Lord of the Crystal Bow was swell, but wasn't as interesting as the one for Martian Miniature.

All in all, it was a swell issue.

DON MOLIN,
6440 N. Claremont,
Chicago, Ill.

WHAT A LIST!

Sirs:

The following are, in my opinion, the best stories that have appeared in AMAZING STORIES since January 1938:

January '39: "I, Robot" (Binder).
February '39: "Mr. Craddock's Amazing Experiment (Temple).
March '39: "The Raid From Mars" (Breuer).
April '39: "World Without Women" (Ayre).
May '39: "Where Is Roger Davis?" (Reed).
June '39: "World Without Death" (Cross).
July '39: "The Trial of Adam Link, Robot" (Binder).
August '39: "Wives in Duplicate" (Wilcox).
September '39: "When the Moon Died" (Wilcox).
October '39: "History in Reverse" (Laurence).
November '39: "Dictator of Peace" (Wilcox).
December '39: "The Hidden Universe" (Farley).
January '40: "Adam Link in Business" (Binder).
February '40: "Adam Link's Vengeance" (Binder).
March '40: "Black World" (Steber). (Really neat.)
April '40: "Black World" (Steber).

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May '40: "Adam Link, Robot Detective" (Binder).

June '40: "Slave Raiders From Mercury" (Wilcox).

July '40: "When the Gods Make War" (Steber).

August '40: "Suicide Squadrons of Space" (Oops, but you know when) (O'Brien).

September '40: "The Synthetic Women" (Powell).

October '40: "The Voyage That Lasted 600 Years" (Wilcox).

November '40: "West Point 3000 A.D." (Wellman).

December '40: "Adam Link Fights a War" (Binder).

January '41: "John Carter" and "The Giant of Mars" (Burroughs).

February '41: "Battering Rams of Space" (Wilcox).

March '41: "The City of Mummies" (Burroughs).

April '41: "Lords of the Underworld" (Hansen).

May '41: "The Lost Race Comes Back" (Wilcox).

June '41: "Black Pirates of Barsoom" (Burroughs).

July '41: Survivors From 9000 B.C." (Williams).

August '41: "Yellow Men of Mars" (Burroughs).

September '41: "Ferdinand Finknodle's Perfect Day" (O'Brien).

October '41: "Invisible Men of Mars" (Burroughs).

November '41: "Convoy to Atlantis" (McGivern).

December '41: "Secret of Planetoid 88" (Repp).

January '42: "The Test Tube Girl" (Patton).

February '42: "The Return to Pellucidar" (Burroughs).

March '42: "Men of the Bronze Age" and "Disciples of Destiny" (Burroughs and Wilcox).

April '42: "Tiger Girl" and "Adam Link Saves World" (Erb and Binder).

May '42: "Lord of the Crystal Bow" (Farnsworth).

June '42: "The Avengers" (McGivern).

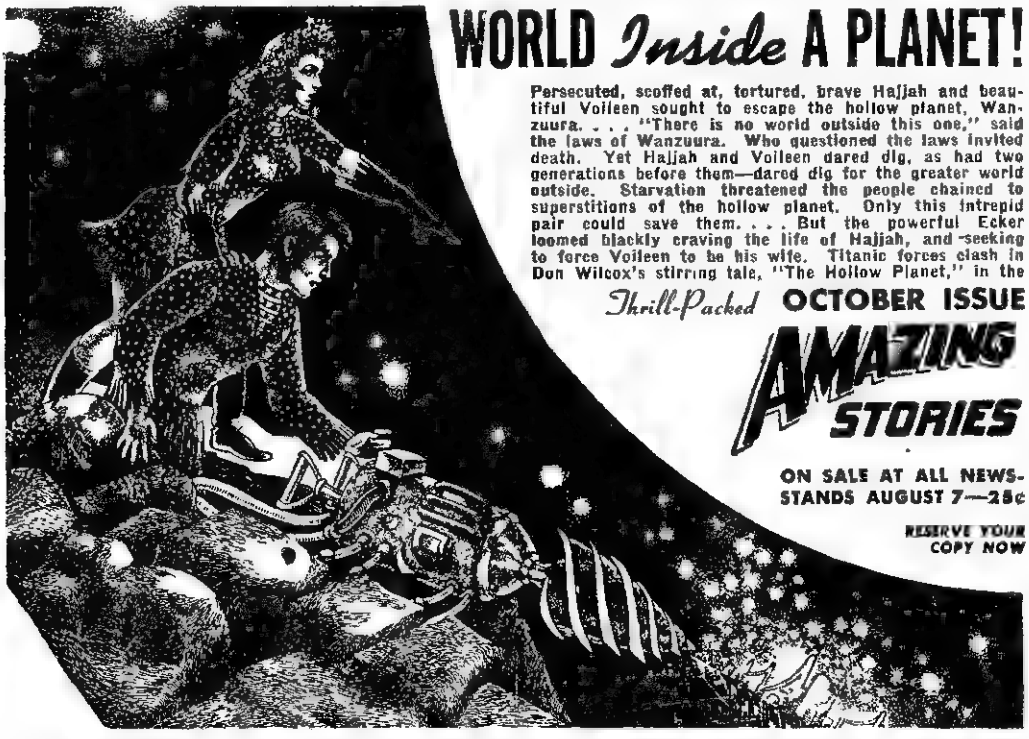
CHARLES NUTT,
3025 Ainslie St.,
Chicago, Ill.

This list was very interesting to your editor. We wonder what you other readers think?—Ed.

A NOTICE

Sirs:

Due to some confusion in the minds of fans, that is, figuring from the letters we get, about the officers of the Los Angeles Science Fantasy So-



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ciety, I have been requested to write to you giving a list of the personnel. Will you please print this in Discussions or maybe run through it in your editorial?

The officers are:
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Morojo, Treasurer.
N. Willmorth, Secretary.
Paul Freehafer, Librarian.
Forrie Ackerman, editor, Shangri-L'Affaires.

N. WILLMORTH,
Box 5262 Metro. Sta.,
Los Angeles, Calif.

WANTED . . .

Sirs:

I was very pleased to see that you included my letter in Discussions in the June AS. If you would I wish you would quote me as saying I am in the market for the five Pellucidar yarns at reasonable prices and in good condition.

Bloch's current series is an excellent one. Keep them coming. "The Avengers" in the current AS was very good but certainly did not contain the "most amazing prophecy since the famed Nostradamus." McGivern does better with humor as witness his recent "Bertie and the Black Arts" in the April FA. I must say your short stories are little less than literally amazing. In the past several issues of both FA and AS there has been a surprisingly large percentage of excellent to superb shorts. In the latter category fall "The Legend of Mark Shayne," McGivern's short, and "Return of Joan of Arc," the latter being perhaps the most impressive short piece of melodramatic writing I have ever had the pleasure to read. In the former category fall "Brother Michel," Bloch's series, the two "Juggernaut Jones" stories.

I am sorry that Finlay did not illustrate the last two in Bloch's series. When will we have more of him? I must say, though, that the Magarians are filling his shoes quite ably while he is absent.

SYLVESTER BROWN, JR.,
7 Arlington St.,
Cambridge, Mass.

WE CERTAINLY DO!

Sirs:

Remember me? I'm the reader that lost an eye, but still reading—yea, more than ever. Your mags are too good to leave alone. By the way, could you use some new talent? I have some stories in the making that you may get to see. They're good—I hope.

Don Wilcox is getting better all the time—if that's possible. He's next to the old master, himself. Which reminds me that your mags have lost much of their lure since E. R. B.'s. stories have come to a finis. How about bringing back the "Cave Girl." I think you mentioned doing that. Contrary to most of your readers, I do not like McGivern.

Some readers seem not to like St. John, but I do. Maybe it's just because I'm so used to see-

(Continued on page 237)

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(Continued from page 235)

ing him in E. R. B.'s books, but please—never let anyone but him illustrate Burrough's stories. And don't lose the Magarians. They come as close to Finlay in quality as any artist could.

Say—who's that guy that says McCauley's female is poorly drawn? I think Mr. Thompson and the two gentlemen he mentioned are like some two-bit politicians I know who try to make themselves noticed by the stink they raise.

The three best stories in the last few months are: "Disciples of Destiny," "Doorway to Hell," and "Mademoiselle Butterfly." I did not rate Burroughs with these, for E. R. is in a class by himself.

MORRIS A. BAIL.
Eagle Bend, Minn.

Certainly we'll use new talent. Just give us a look at your manuscripts. We'll give them our personal attention.—Ed.

SHAME! HENRY

Sirs:

In the August 1941 edition of AMAZING STORIES you printed an article by Henry Gade depicting a city on Saturn. In this article author Gade states that the people of Saturn would still be in primitive stages and that their highest type of mechanism would be a gas-turbine motor. It seems that in 11 short months the people of Saturn have advanced to the stage where they have a radium airship, an artificial gravity machine, and a neutronium like metal. Maybe author Gade can explain this strange phenomenon.

With the exception of the front cover the rest of the book is swell. I rate the stories as follows: 1. Gods of the Jungle (more of Bond). 2. The Return of Hawk Carse (hang on to Gilmore). 3. Squadron of the Damned. 4. Election Campaign on Saturn (fine short). 5. Blitzkrieg in the Past (Cabot's at ebb). 6. Peter Pettigrew's Prisoner. 7. Tie between The Powers of Darkness and The World Beyond (both stinkaroos). The art work, usually fine, was only fair. Even Magarian let me down. Let's have a cover by Magarian, get rid of Jackson (or have him turn out something like he did on the "Planet of Lost men") and get Finlay and Paul for interior decorating.

JULIAN SNYDER,
5000 N. Troy St.,
Chicago, Ill.

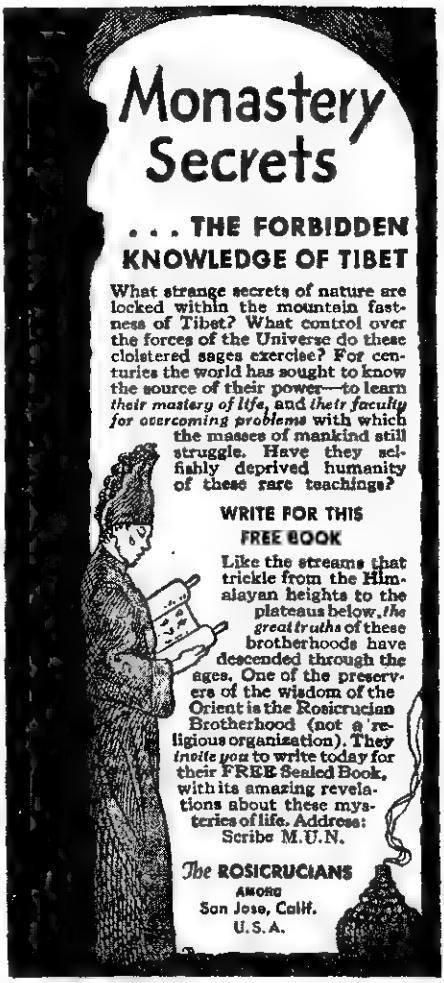
We'll confess that part of the fault lies with us. We got those covers and articles so tangled up, we didn't know which fitted where. And our guess was wrong! But we won't juggle them any more, we promise.—Ed.

ROCKET SHIPS

Sirs:

I have read your mag. on and off for over 3 years now and have always planned to write to

(Concluded on page 239)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Plastic Airship of Europa

by HENRY GADE

The people of Europa have made the dirigible a marvelous success, and all their aircraft are lighter-than-air ships made of plastics

ON the back cover this month you will see an airship flying over the Europan city of Oor. This ship is a sort of dual dirigible, with the passenger and crew compartment supported between them. The city of Oor, down below, is made of glass-like plastic. In fact everything on this world is made of plastic. This science has been developed to a very high degree by the insect-people of the planet. Although the world is large enough to be called a planet, it actually is not, being one of the moons of Jupiter.

Let us consider the Europan airship from our own scientific standards. First, ships as lightly constructed as this have proven they have weak points, witness the destruction of all huge earth dirigibles. They are too fragile. The Europan ship hasn't this weakness. It is constructed of a plastic material which is as strong as steel, and yet lighter than aluminum.

This plastic material is constructed in great sheets, is cut to pattern and rolled, then welded together so that it is actually one complete, seamless piece. This makes for great strength. The plastic is extremely resistant to blows, and will not dent, since it yields slightly, and returns to its original form.

It is extremely tough, and hard to pierce. Thus, the twin dirigibles contain no gas bags, or other cumbersome and weighty apparatus, but are themselves filled with the gas that makes the ships lighter than air. By a system of bulkheads, each of these twin dirigibles can support itself in the air even if one or two of the sections develop leaks.

The controls of the ship are inherent in these dirigible portions, outer fins and rear rudder making for swift maneuverability while in the air, and perfect control of sideslip and turn.

All up-and-down motion, shock from hitting air-pockets, and rocking is taken up by the dirigible portions, while the centrally-slung cabin rides smoothly and evenly. When turns are made, the ship does not bank, but rather performs a sort of "skid" and comes around on an even keel.

The propelling power of these ships is something absolutely unknown on Earth. It is the utilization of that waste electrical power, static electricity, plus the electro-magnetic energy of the planet itself.

The plastic material of the ship naturally generates a great deal of static electricity, which results from the friction against the atmosphere. It is much the same energy-manifestation you get when you use a plastic or rubber composition comb in your hair.

This is transmitted to the motors in the central portion of the ship, transformed into energy of the same pole as the magnetic energy of the planet itself, depending on the direction in which travel is desired. Thus, navigation is on much the same principle as an ordinary sailing ship. Electro-magnetism acts as the "sail" and the rudder steers the ship on the correct "tack."

This energy is directed from the motors into a large metallic plate in the bottom of the central part of the ship, energizing it exactly as is an electro-magnet, with the proper magnetic pole. (Instantly reversed by the simple expedient of feeding the power from the opposite in-let and reversing the field of force from the coils which magnetize the great plate).

The ship shown here is a passenger ship, a fast, comparatively small ship for quick transportation of passengers only. (Although this particular ship is approximately 125 feet long).

Europa also has giant ships with each of its gas chambers as large as the largest Earth dirigible, designed to carry tremendous loads of freight. Europa is very mountainous, and there are no seas, so the air is the only practical method of transportation.

Radio compasses guide the pilots to the correct destination, each city having a directional guide beam sending out waves on a particular waveband. When the electro-motors of the ship are attuned to the destination desired, the controls are automatic, and the ship keeps "on the beam" with constant self-correction.

Perhaps we here on Earth can apply the science of plastics and electro-magnetism to ships such as these, when the war is over.

(Concluded from page 237)

you. So here it comes.

In my opinion the best story of your July issue is "Blitzkrieg in the Past." As for the serials I save them until I have both parts, but I think they are swell and "Gods of the Jungle" is the best yet.

Now for the complaint. I do not like the rocket ships your artists draw, they should look at Buck Rogers in the comic books or in the papers.

As for the features I think they are all good and the feature "Airships of Other Worlds" especially so.

DON CARTER,
1045 N. Arthur,
Pocatello, Idaho.

Personally, we've looked at Buck Rogers and the ships don't seem to be superior to ours. In fact, we challenge them to open combat in space. Krupa's ships of the past cannot be surpassed.—Ed.

HAWK CARSE

Sirs:

I've been reading AMAZING now for almost 5 years, and it has provided me with quite a few hours of enjoyment. Astronautics has interested me since I was knee-high to a science-fiction mag.

Now for a little commentary. The best story I've read in a long time is "The Return of Hawk Carse." I think it could really be compared with the classics of science-fiction. The original stories must have been something! It's a light shining through the horrible collection of hack that has been polluting the field lately.

And speaking of hack, that story, "The Sheriff Of Thorium Gulch," is really a gruesome example of it. PLEASE, no more of this tripe! All the other stories are pretty good, and the minor features are always hot stuff.

One more thing, the Italians did not develop the jet-propulsion plane. It was first designed by Dr. Meyers, an American. He is now working at the Air-Force Laboratory at Wright, trying to perfect it for the Army. The Italians got the idea from him. Details of his machine are censored because of the war, but it is known that his 120 pound motor delivers 2,000 horse-power.

THOMAS PETRICK,
25 N. Columbus Ave.,
Mount Vernon, N. Y.

Yes, the design was American, but the development to actual flight was Italian. See the official book of the Naval Institute. That's where author Gade got his facts for the article.—ED.

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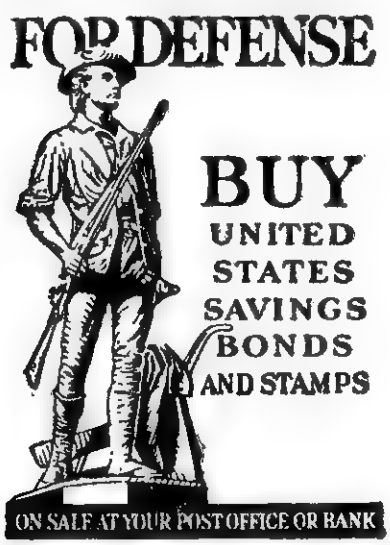

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Chapter 10—What Is Sterilization
Many misinformed on subject—advantage to individual—advantage to society.

Chapter 11—Fertilization
Why children should be had early in marriage—superstitions regarding pregnancy—how fertilization accomplished in sex union—assuring fertilization under normal conditions—causes of infertility.

Chapter 12—Pregnancy
Changes following fertilization—first indications of pregnancy—care of prospective mother—abortions and miscarriages—dangers of pregnancy—preparations for birth—pregnancy 280 days approximately.

Chapter 13—New Tests for Pregnancy
Need for prompt diagnosis in many cases—how test is made—combination tests valuable.

Chapter 14—Can Sex of Unborn Child Be Chosen
Science investigating various theories—no certain methods.

Chapter 15—Motherhood
Actual process of childbirth—follow doctor's instructions—caesarian operation—puerperal fever—summary for prospective mothers.

Chapter 16—Methods of Easy Childbirth
Select doctor you have complete confidence in—follow his instructions—anesthetics which diminish labor pains without injuring infant.

Chapter 17—Intimate Questions of Husbands
Overcoming some common sexual problems—how to attain "control"—importance of prolonged courtship—effect of frequency on control—overcoming frigidity in wives—can impotency be overcome—organic deficiencies—various faults and their remedies.

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